١,

```
Minimum I
Maximum I
                                                                                                                                                                                                                   Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Title:
                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                             and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
DB
                                                                                                                                                                                                     Score
                                                                                                                                                                     266.5
239
                                                                                                                                                        175
            80.5
80.5
80.5
80.5
80.5
                                                                                                          84.5
81.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     671580 seqs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MDRVPFCCLLFIGLLNPLLS.....TRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    March 10, 2003, 17:35:28 ; Search time 23.6027 Seconds
                                                                                                                                                                                                                   Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-831-907A-33
               13.9
13.2
12.7
12.7
12.6
12.6
12.6
12.6
12.6
12.6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SPTREMBL_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Maximum Match 100%
Listing first 45 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sp_archea:*
                                                                                                                                                                                                                                                                                                                                                                                                           sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                                        sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                                                                                                  sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                                                                                               sp_mammal:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                          sp_invertebrate: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             sp_bacteria:*
                                                                                                                                                                                                                                                                                                                         sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
                                                                                                                                                                                                                                                                                                              sp_archeap:*
                                                                                                                                                                                                                                                                                                                                                           sp_vertebrate:*
                                                                                                                                                                                                                                                                                                                                                                         sp_virus:*
                                                                                                                                                                                                                                                                                                                                                                                     sp_rodent:*
                                                                                                                                                                                                                                                                                                                                                                                               sp_plant:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P_human:∗
                                                                                                                                                                                                        Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fungi:*
                         168
229
523
4899
390
404
409
419
423
                                                                                                                                                                                                        DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gapext 0.5
                                                                                                                                  16
                                                                                             Q9HBP7
Q9BUV9
Q9VR91
                                                                                                                                 Q9VCU9
Q93J49
                                                                                                                                                       Q95J46
Q8TAU6
Q95K72
                                                                                                                                                                                                        IJ
             Q9PRE6
057584
                                    Q9PRE5
O57582
Q9PRE4
O57581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             summaries
                                                                                    Q9PRE3
                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (without alignments)
1073.767 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              671580
                                                                                                                            Q8tau6 homo sapien
Q95k72 sus scrofa
Q9vcu9 drosophila
Q93j49 streptomyce
                               057581 cynons of 057581 cynons
                                                                                                        Q9hbp7 homo sapien
Q9buv9 homo sapien
                                                                                                                                                                                                     Description
                                                                                             Q9vr91 drosophila
                                                                                                                                                                                Q95j46 sus scrofa
                                                          O9pre3 ambystoma m
O9pre5 ambystoma m
O57582 cynops pyrr
                       cynops pyrr
ambystoma m
cynops pyrr
```

ALIGNMENTS

```
Matches
               Best Local
                                Query Match
                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
TISSUE-SPINAL CORD;
Sugo T., Mori M.;
                                                            InterPro; IPR001483; Urotensin_II.

Pfam; PF02083; Urotensin_II; 1.

PROSITE: PS00984; UROTENSIN_II; UNKNOWN_1.

SEQUENCE 121 AA; 13580 MW; 656E4B0lAF69101B CRC64;
                                                                                                                            EMBL; AB063244; BAB60887.1;
EMBL; AB063244; BAB60887.1;
                                                                                                                                                                                                                            TISSUE-SPINAL CORD;

MEDLINE-20017983; PubMed-10548501;

Mor1 M., Sugo T., Abe M., Shimomura Y., Kurihara M., Kitada C.,

Kikuchi K., Shintani Y., Kurokawa T., Onda H., Nishimura O.,
                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sus scrofa (Pig).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Urotensin II transcript variant 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-DEC-2001 (TrEMBLre1. 19, Created)
01-DEC-2001 (TrEMBLre1. 19, Last sequence update)
01-MAR-2002 (TrEMBLre1. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q95J46
                                                                                                                                                              receptor, SENR (GPR14).";
Biochem. Biophys. Res. Commun. 265:123-129(1999).
                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                295J46;
                                                                                                                                                                                                                  fujino M.;
                                                                                                                                                                                              Orotensin II is the endogenous ligand of a G-protein-coupled orphan
               h 41.6%;
Similarity 49.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
           Score 266.5; DB 6
Pred. No. 1.8e-18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121. AA
                                DB 6;
44;
                            Length 121;
                                                                                                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
Sus.
```

δõ

æ

Conservative

14; Mismatches

Indels

1;

Gaps

1;

CLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGES 67

```
RESULT 3
Q95K72
   RESULT
Q8TAU6
                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q8TAU6;
                                                                                                                  TISSUE=SPINAL CORD;
MEDLINE=20017983; PubMed=10548501;
Mori M., Sugo T., Abe M., Shimomura Y.,
Kikuchi K., Shintani Y., Kurokawa T., Or
                                                                                                                                                                                                                                                                                                               01-DEC-2001 (TrEMBLrel. 19, Create 01-DEC-2001 (TrEMBLrel. 19, Last s 01-MAR-2002 (TrEMBLrel. 20, Last a Urotensin II transcript variant 2.
                           Pfam; PF02083; Urotensin_II;
                                     receptor, SENR (GPR14).";
Blochem. Biophys. Res. Commun. 265.
EMBL; AB063246; BAB60889.1;
InterPro; IPR001483; Urotensin_II.
                                                                                                                                                                          SEQUENCE FROM N.
                                                                                                                                                                                                    Submitted
                                                                                                                                                                                                                           TISSUE-SPINAL
                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Mammalia; Eutheria; Cetartiodactyla; Sulna; Suidae;
                                                                                                                                                                                                                                                                                                        Sus scrota (Pig)
                                                                                                                                                                                                                                                                                                                                                                        Q95K72;
                                                                                                                                                                                                                                                                                                                                                                                     Q95K72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases EMBL; BC025776; AAH25776.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-JUN-2002 (TrEMBLrel 01-JUN-2002 (TrEMBLrel 01-JUN-2002 (TrEMBLrel Similar to urotensin 2
                                                                                                                                                                                                                                                                   NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                           "Urotensin II is the endogenous ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Prlmates; Catarrhinl; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9606
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 66 LREADAGMDIFYPKGEMRKAFSGQDPNIFLSHLLARIKKPYKKRGPPSECFWKYCV 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7
                                                                                                                                                                                                                  .∃
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQ 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLLLLGCLGLLFALPVPDSRKEPLPFSA-PEDVRSAWDELERASLLQMLPETPGAEAGED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  = - - : = - :
   PS00984;
85 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                Mori M.;
                                                                                                                                                                                                (JUN-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          139 AA; 16276 MW;
                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                            CORD;
UROTENSIN_II; UNKNOWN_1.
9644 MW; F519CFEDFCBAA863 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21,
21,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17;
                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 239; DB 4
Pred. No. le-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32DC529936D5BDB6 CRC64;
                                                                  265:123-129(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                   Onda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     139
                                                                                                                                                                                                                                                                                                                                                                                    85
                                                                                          of a G-protein-coupled
                                                                                                                   Kurihara M., Kitada C.,
nda H., Nishimura O.,
                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Å
                                                                                                                  н.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       38;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                             Sus.
                                                                                                                                                                                                                                                                                         Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65
```

```
RESULT
Q9VCU9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  멍
                                                                                                                                                                     RA Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Adams M.D., Celniker S.E., Li P.W., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang O., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang O., Chen L.X.,
RA Sutton G.G., Wortman J.R., Yandell M.D., Zhang O., Chen L.X.,
RA Barlandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barlandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D.,
RA Barlandon R.C., Boxler E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Ballew R.M., Basu A., Baxer E.G., Helt G., Nelson C.R., Miklos G.L.G.,
RA Ballew R.M., Basu A., Baxer B.J., Bhandari D., Bolshakov S.,
RA Ballew R.M., Boxler E.G., Bayraktaroglu L., Beasley E.M.,
RA Borkova D., Botchan M.A., Block J., Brokstein P., Botcher A., Chandra I.,
RA Borkova D., Botchan M.R., Block J., Brokstein P., Bothakov S.,
RA Borkova D., Botchan M.R., Block J., Brokstein P., Bothakov S.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davles P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davles P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Dowles P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Dowles P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Dowles P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davles P.,
RA Dodson K.J., Downes M., Dugan Rocha S., Dunkov B.C., Dunn P.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guah P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Howland T.J., Wei M.-H., I begwam C.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., I begwam C.,
RA Hostin D., Holland T.J., Wei M. H., Liding Y., Lin X.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merika M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
RA Merika M., Kalush F., Karpen G.,
RA Merika M., Ka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q9VCU9;
Q9VCU9;
01-MAY-2000
01-MAY-2000
                                                 Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A., Ye J., Yeh R.-F., Zaveri.J.S., Zhan M., Zhang G., Zhao Q., Zheng Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C., "The genome sequence of Drosophila melanogaster."; Science 287:2185-2195(2000)
                                  EMBL; AE003740; AAF56056.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=20196006; PubMed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CG4792
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Drosophila melanogaster (Fruit fly)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DCR-1 OR CG4792.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----MDIFYPRGEMRKAFSGQDPNIFLSHLLARIKKPYKKRGPPSECFWKYCV 85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGES 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLLLLGCLGLLFALPVPDSRKEPLPF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   13,
13,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 175.5; DB 6
Pred. No. 8.6e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2249
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ----SDAG--
                                                                                                                    X., Smith H.O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fleischmann W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                         Χ. A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              36
```

Tue

InterPro; InterPro; InterPro; InterPro;

InterPro;

IPR000999; IPR001650; IPR001159; DS_RBD IPR005034; DUF283

RNase_3 Helicase_C

```
RESULT
Q93J49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
δÕ
                         В
                                                QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                          Best
                                                                              Matches
                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00636; Ribonuclease_3; 2.
SMART; SM00458; DSRM; 1.
SWART; SM00490; HELICC; 1.
SWART; SM00535; RIBOC; 2.
PROSITE; PS00137; DS_RBD; 1.
PROSITE; PS00142; RNASE_3_1; 1.
PROSITE; PS00142; RNASE_3_2; 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam;
                                                                                                                                                                                                                                                                                                                                                                      Streptomyces coelicolor.
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Bacteria; Firmicutes; Streptomycineae; Streptomycetaceae; Streptomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                        01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last seq)
01-JUN-2002 (TrEMBLrel. 21, Last anno
Hypothetical protein SC03054.
SC03054 OR SCBAC19G2 09C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ptam;
                                                                                                                                                        coelicolor A3(2).";
Nature 417:141-147(2002).
EMBL; AL596138; CAC44519.1;
                                                                                                                                                                                                                         Rabbinowitsch E., Rajandream M.A., Rutherford K., Rutter S., Seeger K., Saunders D., Sharp S., Squares R., Squares S., Ta; Warren T., Wietzorrek A., Woodward J., Barrell B.G., Parkhil
                                                                                                                                                                                                                                                            STRAIN-A3(2) / M145;
BentLey S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challis G.L.,
Thomson N.R., James K.D., Harris D.E., Quail M.A., Kieser H.,
Thomson N.R., James K.D., Harris D.E., Quail M.A., Kieser H.,
Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Collins M.
Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S.
Huang C.-H., Kieser T., Larke L., Murphy L., Oliver K., O'Neil S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q93J49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATP-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                Hypothetical protein SEQUENCE 168 AA; 1
                                                                                                                                                                                                                        Seeger K., Saunders D., Sl
Warren T., Wietzorrek A.,
                                                                                                                                                                                                             Hopwood D.A.;
                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A
                                                                                                                                                                                         "Complete genome sequence of the model actinomycete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         467
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
 66
                         11
                                                   12
                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NTAQPRTRRRVYTRRHHRDHNDGSDTLCALIYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NSNTVLSRLLARTRKQHKQH--GAAPECFWKYC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ESKCRMVDQMDQPPTETRALVATLEQILHTTEDRQTNRSAARVTPTPTPAHAKPKPSSGA 466
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EDALRALEEL-----ERMALLQTLRQTM-GTEAGESPGEAGPSTETPTPRGSMRKAFAGQ 91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PF00271;
PF02170;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PF00035; dsrm;
PF03368; DUF28
                           LGLVETLVNTLDLETGADSLDTEEGRAPPGLTEDDVPAARELR--
                                                 IGLLNPLLSLPVTDTGERTLQL------PVLEEDALRALEELERMALLQTLRQTMGTEAG 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2249 AA;
                                                                                                                              168 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Helicase
                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DUF283; 1.
helicase_C; 1.
 ĠE.
                                                                                                                              17492 MW;
AGPSTETPTPR-GSMRKAFAGQNSNT--
                                                                                         13.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   255328 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 . 15;
                                                                           14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Last annotation
                                                                                         Score 84.5;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                8A5462B6ECD0BEC7 CRC64;
                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     D693F0432AC8033D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         168
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A
                                                                                                      DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 42;
                                                                              49;
                                                                                                                                                                                                                          Squares S., Tayl
l B.G., Parkhill
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 2249
                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                              Inde1s
                           ---ESLRATLLAHAG
                                                                                                                                                                                               Streptomyces
-VLSRLLARTRKQH
                                                                                                                                                                                                                                       Taylor K.,
                                                                              29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                           S.X
                                                                             Gaps
                           65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ω
                                                                              7;
```

```
RESULT
Q9HBP7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ACCOMPAND ACCOMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                          Q9BUV9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÕ
Query Match
Best Local S
Matches 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9HBP7;
01-MAR-2001
01-MAR-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gu J.R., Wan D.F., Zhao X.T.,
Gu J.R., Wan D.F., Zhao X.T.,
Gu J.R., Wanna Y., Qiu X.K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Novel Human cDNA clones with growth.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9HBP7
                                                                                                             InterPro; IPR000649; IF-2B.
Pfam; PF01008; IF-2B; 1.
Initiation factor.
                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9BUV9;
01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-OCT-2001 (TrEMBLrel. 18, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical proter 229 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted (DEC-1999) to the EMBL; AF218009; AAG17251.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hypothetical 25.2 kDa protein
                                                                                                                                                                              Strausberg R.;
Submitted (JAN-2001) to the
EMBL; BC001870; AAH01870.1;
                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                           Similar to eukaryotic translation initiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9BUV9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000649; IF-2B. Pfam; PF01008; IF-2B; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; AF218009;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Υu J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9606;
                                                                                                                                                                                                                                                    TISSUE=LUNG;
                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66
  Local Similarity hes 26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  42 RALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLL 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KACEAA-DCHWAY 137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         KOHGAAPECFWKY 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HPPHRAYTPLGELLAAAPLVVAVDPADGSAALAPAGEGSLTARVAAAVAQALVAGTWSRL 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KKPERQQVPTRKDYGSKVSLF 165
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ARTRKQ----HKQHGAAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RAXQEAER-----ALKQARKGEQGGPPPKASPSTAGETPSGVKRLPEYPQVDDLLLRRLV 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Han L.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                          factor.
523 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TremBLrel. 16, Created)
(TremBLrel. 16, Last sequence update)
(TremBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Chordata;
Primates;
                       · 12.7%;
32.1%;
                                                                                                                                                                                                                                                                                                                                               Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25208 MW;
                                                                                          57557 MW;
                                                                                                                                                                                                                                                                                                                                                                    Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12.7%;
32.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                          EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 81.5;
Pred. No. 3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhou X.M.,
Qian L.F.,
  Pred. No. 9.6
); Mismatches
                                     Score 81.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Craniata; Vertebrata; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata;
Catarrhini; Hominidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  function of inhibiting cancer cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5FF5D040883554F6 CRC64;
                                                                                             5F38CF10CAD5A45E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jiang H.Q.,
He L.P., Li
                         . 6 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A
                                                DB
                                                                                                                                                                                                                                                                                                                                               Hominidae; Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
                                                                                                                                                                                                                                                                                                                                                                                                                factor
                                                                                                                                                                                                          databases
                                                                                               CRC64;
                                            Length 523;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zhang
H.N.,
                                                                                                                                                                                                                                                                                                                                                                                                                  2в
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P.P.,
Yu Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
```

10;

36;

Indels

9;

Gaps

```
RA Ballew R.M., Basu A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bessley E.M.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottler P.,
RA Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Pleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Gelbart W.M., Glasser K.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Kimmel B.E., Kodlra C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodlra C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Kimmel B.E., Kodlra C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Merkulov G., Milshian N., Wobarry C., Morris J., Moshrefi A.,
RA Merkulov G., Milshian N., Wobarry C., Morris J., Moshrefi A.,
RA Raizzolo M., Pitman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Raizzolo M., Pitman G.S., Saunders R.D.C., Scheeler F., Shen H.,
RA Raizzolo M., Pitman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Raizzolo M., Pitman G.S., Saunders R.D.C., Scheeler F., Shen H.,
RA Shue B.C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Raizzolo M., Pitman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Shue B.C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T.,
RA Shue B.C., Saunders R.D., Sheeler F., Shen H.,
RA Shue B.C., Sheeler F., Warley K.C., Wu 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
Q9VK91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                   "The genome seque....
Science 287:2185-2195(2000).
Science 287:2185-2195(2000).
                                                           FlyBase; FBgn0031107; HERC2.
InterPro; IPR000569; HECT_domain.
InterPro; IPR000408; Reg_chr_condens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Adams M.D., Ceiniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S. Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D., Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilldae; Drosophila.
                                             InterPro; IPR000449;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2001 (TrEMBLrel. 01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE~20196006;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HERC2 protein.
HERC2 OR CG11734.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9VR91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9VR91;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     160 KKPERQQVPTRKDYGSKVSLF 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARTRKQ----HKQHGAAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RAKQEAER-----ALKQARKGEQGGPPPKASPSTAGETPSGVKRLPEYPQVDDLLLRRLV 159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLL 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed-10731132;
                                           UBA_domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13,
16,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4899 AA
```

```
RESULT 9
Q9PRE3
                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SQ DR DR
               Best Local Similarity
   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                               PROSITE; PS00027; HOMEOBOX_1; 1. PROSITE; PS50071; HOMEOBOX_2; 1. PROSITE; PS00034; PAIRED_BOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9PRE3 PRELIMINARY; PRT; 390 AA. 09PRE3; 01-MAY-2000 (TrEMBLrel. 13, Created) 01-MAY-2000 (TrEMBLrel. 13, Last sequence update) 01-MAR-2002 (TrEMBLrel. 20, Last annotation update Paired-box transcription factor (Fragment).
                                                                                                                                     SMART; SM00389; HQX; 1.
SMART; SM00351; PAX; 1.
                                                                                                                                                             Pfam; PF00046; homeobox; 1.
Pfam; PF00292; PAX; 1.
PRINTS; PR00027; PAIREDBOX.
ProDom; PD000010; Homeobox; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
PROSITE;
PROSITE;
                                                                                                                                                                                                                                                 -:- SUBCELLULAR LOCATION: NUCLEAR
-:- SIMILARITY: CONTAINS A PAIRED
EMBL; AF169415; AAD50904.1; -.
                                                                                                                                                                                                                                                                                                                                                           Glaser T.M., Walton D.S., Cai J., "PAX6 gene mutations in aniridia. (In) Wiggs J. (eds.);
                                                                 NON_TER
                                                                            Paired box;
                                                                                        DNA-binding;
                                                                                                                                                                                                             InterPro; IPR001356; Homeobox.
InterPro; IPR001523; Paired_box.
                                                                                                                                                                                                                                                                                         Submitted
                                                                                                                                                                                                                                                                                                                                     Molecular genetics
New York (1995).
                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ambystoma mexicanum (Axolot1).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                       HSSP; P26367; 6PAX
                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-8296;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2189 ELVALLRRLH 2198
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2132 AQWGAEEEPRMPALVHQLFATLGRIALHCPGDA---SLLPTAEGKARVLLTASHSGSVAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2072 LGWLNLGFIRAISGDCPRLCLELSTPGWLSHYLSLLEQPAGNEAGVYRQLHCLRLLQLIL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SMART; SM00119; HECTC; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR00633; RCCNDNSATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RLLARTRKQH 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----EELERM-ALLQTLRQTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PS50237; HECT; 1.
PS500236; RCC1_2; UNKNOWN_4.
PS50012; RCC1_3; 18.
PS50012; RCC1_3; 18.
L 4899 AA; 528653 MW; 2D10F544BDF71F4C CRC64;
                                                                                                                                                                                                                                                                                                    3
                                                                                                                                                                                                                                                                                                              FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                  FROM
                                                                                                                                                                                                                                                                                     (JUL-1999) to the EMBL/CenBank/DDBJ databases
                                                   390
   Conservative
                                                                        Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                       Developmental
                                                   AA;
                                                                                                                                                                                                                                                                                                                                               of ocular disease, pp.52-82, Wiley Press
                                                   43548 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                              Chordata; Craniata; Vertebrata; Euteleostomi; Caudata; Salamandroldea; Ambystomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12.6%; 28.5%;
               24.5%;
                           12.6%;
   17;
                                                                                   protein; Homeobox; Nuclear protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14;
            Score 80.5; D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 81;
Pred. No.
                                                37AF39F5CA34158B CRC64
 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M1smatches
                                                                                                                                                                                                                                                                                                                                                                         , Epstein J.A., Jepeal L.,
.";
                                                                                                                                                                                                                                                             BOX DOMAIN
                                                                                                                                                                                                                                                                         (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1.4e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 5;
                         DB 13;
 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 4899
 Indels
                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Inde1s
                         390;
 17:
                                                                                                                                                                                                                                                                                                                                                                                  Maas R.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            44
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   տ
```

Tue

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALD DRACE OF THE D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                        RESULT 11
057582
                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                          δÃ
S DT DT AC
                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                     01-JUN-1998
01-JUN-1998
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAY-2000
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q9PRE5;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9PRE5
                                                                                                   057582
057582;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SUBCELLULAR LOCATION: NI
EMBL; AF169413; AAD50902.1;
HSSP; P26367; 6PAX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (JUL-1999) to the EMBL/GenBank/DDBJ-!- SUBCELLULAR LOCATION: NUCLEAR (BY SIMILAR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glaser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Molecular genetics of ocular disease, New York (1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "PAX6 gene mutations in aniridia (In) Wiggs J. (eds.);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=8296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ambystoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amphibia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ambystoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Paired-box transcription
                      PAX6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DNA-binding; Homeobox; Nuclear protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE; PS00027; HOMEOBOX_1; 1. PROSITE; PS50071; HOMEOBOX_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRINTS; PR00027; PAIREDBOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR001523;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     114
Cynops
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ProDom;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ?fam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  [nterPro; IPR001356;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10
                                                                                                                                                                                                                                                                                                       128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                           186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              aser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                80
                                                                                                                                                                                                                                                                                                                                               20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PDGCQQQEGGGENTNSISSNGEDSDEAQMRLQLKRKLQRNRTSFTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRGSMRKAFAGQNSNTV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NIPSVSSINRVLRNLASEKQQMGADGMYDKLRMLNGQTGTWGTRPGWYPGTSVPG--QPT
                                                                                                                                                                                                                                                                                                     NIPSVSSINRVLRNLASEKQQMGADGMYDKLRMLNGQTGTWGTRPGWYPGTSVPG--QPT 185
                                                                                                                                                                                                                                                                PRGSMRKAFAGQNSNTV--
                                                                                                                                                                                                                                                                                                                                            SLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPT 79
                                                                                                                                                                                                                         PDGCQQQEGGGENTNSISSNGEDSDEAQMRLQLKRKLQRNRTSFTQ
                      SS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PF00046; homeobox; 1. PF00292; PAX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 T.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              T.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SM00351; PAX; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SM00389; HOX;
pyrrhogaster (Japanese
                                                                                                                                                                                                                                                                                                                                                                                      26;
                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PD000010; Homeobox; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mexicanum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    404 AA;
                                       (TrEMBLrel.) (TrEMBLrel.) (TrEMBLrel.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Walton D.S.,
                                                                                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Axolot1).
Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45073 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homeobox.
Paired_box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caudata;
                                                                                                                                                                                                                                                                                                                                                                                                        12.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13,
13,
20,
                                         20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  factor +-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cai J.,
                                                                                                                                                                                                                                                                                                                                                                                        17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ·Created)
                                       Created)
Last sequences
Last anno
                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 9;
                                                                                                                                                                                                                                                                                                                                                                                                                             Score 80.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Salamandroidea; Ambystomatidae,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
    common
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0E16D591EC314482 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                           annotation
                                                           sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Epstein J.A.,
                                                                                                                                                                                                                                                              ---LSRLLARTRKOHKO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                isoform (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -LSRLLARTRKQHKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     404
    newt)
                                                                                                                          409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                pp.52-82,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ΑA
                                                                                                                          ₽
                                                                                                                                                                                                                                                                                                                                                                                                                             DB 13;
                                         update)
                                                                                                                                                                                                                                                                                                                                                                                      46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wiley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jepea1
                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        217
                                                                                                                                                                                                                           231
                                                                                                                                                                                                                                                                  110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ۲
:
                                                                                                                                                                                                                                                                                                                                                                                                                                 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maas
                                                                                                                                                                                                                                                                                                                                                                                        17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R.L.
                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                79
                                                                                                                                                                                                                                                                                                                                                                                        2
```

```
SQUE DE RESERVATION D
OS
OCCOOC
OCCO
OCCOOC
OCCOOC
OCCOOC
OCCOOC
OCCOOC
OCCOOC
OCCOOC
OCCOOC
OCCOOC
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Caudata; Salamandroidea; Salamandridae; Cyno
NCBI_TaxID-8330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00027; HOMEOBOX_1; 1.
PROSITE; PS50071; HOMEOBOX_2; 1.
PROSITE; PS00034; PAIRED_BOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMART; SM00389; HOX; 1. SMART; SM00351; PAX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prints; PR00027; PAIREDBOX. ProDom; PD000010; Homeobox;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSSP; P26367; 6PAX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mizuno M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9PRE4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00046; homeobox;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                   Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases - SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY). -:- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN. EMBL; AF169414; AAD50903.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Glaser T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eukaryota; Metazoa; Chordata;
Amphibia; Batrachia; Caudata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ambystoma mexicanum (Axolotl)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q9PRE4;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Paired box;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA-binding; Developmental protein;
Pfam; PF00046; Pfam; PF00292;
                                                                InterPro; IPR001356; Homeobox.
InterPro; IPR001523; Paired_box
                                                                                                                                                                                                                                                                                                                  Glaser T.M.;
                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                     New York (1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Molecular genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "PAX6 gene mutations in (In) Wiggs J. (eds.);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=8296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ambystoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Paired-box transcription
                                                                                                                                   HSSP; P26367;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 191 PDGCQQQEGGGENTNSISSNGEDSDEAQMRLQLKRKLQRNRTSFTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 SLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRGSMRKAFAGQNSNTV------LSRLLARTRKQHKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NIPSVSSINRVLRNLASEKQQMGADGMYDKLRMLNGQTGTWGTRPGWYPGTSVPG--QPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PF00292; PAX;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001523;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR001356;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Takabatake T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Transcription regulation.
409 AA; 45855 MW; 5B1A5FD50F710510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Walton D.S.,
                                                                                                                                              6PAX
                                   homeobox;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         of ocular disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Caudata; Salamandroidea; Salamandridae; Cynops.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               12.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Paired_box
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homeobox
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ., Cai J., Epstein aniridia.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Takahashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 80.5;
Pred. No. 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Craniata; Vertebrata; Euteleostomi; Salamandroidea; Ambystomatidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  eye
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BOX DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  development.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T.C., Takeshima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homeobox; Nuclear protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 419
                                                                                                                                                                                                                                                                                                                                                                                                                                                     pp.52-82,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            J.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wiley Press
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jepeal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   190
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79
```

```
RESULT 14
Q9PRE6
                                                                              Ş
                                                                                                          망
                                                     밁
                                                                                                                                 Š
                                                                                                                                                                                                                    RESULT
057581
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DR DR DR DR DR DR DR DR KW
                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JUN-1998
01-JUN-1998
01-MAR-2002
                                                                                                                                                                                                          PROSITE; PS00027; HOMEOBOX_1; 1.
PROSITE; PS50071; HOMEOBOX_2; 1.
DNA-binding; Homeobox; Nuclear protein.
SEQUENCE 423 AA; 47363 MW; F4500FDE994BBB32 CRC64;
                                                                                                                                                                                                                                                                   PRINTS; PR00027; PAIREDBOX, ProDom; PD000010; Homeobox; 1. SMART; SM00389; HOX; 1. SMART; SM00351; PAX; 1.
                                                                                                                                                                                                                                                                                                                                                 Mizuno M., Takabatake T., Takahashi T.C., Takesl pax-6 gene expression in newt eye development. Dev. Genes Evol. 207:167-176(1997).

-I. SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY EMBL; D88741; BAA24022.1; -HSSP; P26367; 6PAX.

InterPro; IPR001356; Homeobox.
InterPro; IPR001523; Paired_box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   057581
057581;
                                                                                                                                                                                                                                                                                                                          Pfam; PF00046; homeobox; 1. Pfam; PF00292; PAX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cynops pyrrhogaster (Japanese common newt).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphhbia; Batrachia; Caudata; Salamandroidea; Salamandridae; Cynops.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. Mlzuno M., Takabat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00027; HOMEOBOX_1; 1. PROSITE; PS50071; HOMEOBOX_2; 1. PROSITE; PS00034; PAIRED_BOX; 1.
                                                     205
                                                                                                          147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-8330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PAX6 LS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DNA-binding; Developmental protein; Homeobox; Nuclear protein; Paired box; Transcription regulation.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SMART; SM00389; HOX; 1.
SMART; SM00351; PAX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ProDom;
                                                                              80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PR1NTS; PR00027; PAIREDBOX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                              PDGCQQQEGGGENTNSISSNGEDSDEAQMRLQLKRKLQRNRTSFTQ 250
                                                                             PRGSMRKAFAGQNSNTV------
                                                                                                 NIPSVSSINRVLRNLASEKQQMGADGMYDKLRMLNGQTGTWGTRPGWYPGTSVPG--QPT 204
                                                                                                                          SLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPT, 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPT 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PDGCQQQEGGGENTNSISSNGEDSDEAQMRLQLKRKLQRNRTSFTQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRGSMRKAFAGQNSNTV----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIPSVSS1NRVLRNLASEKQQMGADGMYDKLRMLNGQTGTWGTRPGWYPGTSVPG--QPT
                                                                                                                                                              26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l Similarity
26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PD000010;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           419 AA; 46161 MW; B35096F3AECB5F6D CRC64;
                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TrembLrel. 06, Created)
(TrembLrel. 06, Last seq
(TrembLrel. 20, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homeobox; 1.
                                                                                                                                                                     12.6%; Score 80.5; DI 24.5%; Pred. No. 9.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 80.5; D
Pred. No. 9.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                          -----LSRLLARTRKQHKQ 110
                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -----LSRLLARTRKQHKQ 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            423
                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AΑ
                                                                                                                                                                                    DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Takeshima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 13;
                                                                                                                                                         46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46;
                                                                                                                                                                                 Length 423;
                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 419;
                                                                                                                                                                                                                                                                                                                                                                                                                                              .
:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            217
                                                                                                                                                         17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                       2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
```

```
RESULT 15
057584
ID 05758
AC 05758
AC 05758
AC 05758
DT 01-JU
DT 01-JU
DT 01-JU
DT 01-MA
DE PAX6
OS Cynop
OC Eukar
OC Amphi
OX NCBI_
RN [1]
RN [1]
RN [1]
RP SEQUE
RA M1ZU
RT "PAX-
RT 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ALD DAR REPORT OF THE PROPERTY OF THE PROPERTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
Matches 26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Mizuno M., Takabatake T., Takahashi T.C., Takeshii "pax-6 gene expression in newt eye development."; Genes Evol. 207:167-176(1997).

-i- SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY)
-i- SIMILARITY: CONTAINS A PAIRED BOX DOMAIN.
EMBL; D88741; BAA24025.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUN-1998 (TrEMBLrel.
01-JUN-1998 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                Cynops pyrrhogaster
Eukaryota; Metazoa;
Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        057584;
                                                                                                                                                                                                                                                                                              Amphibia; Batrachia; Caudata; Salamandroidea; Salamandridae; NCBI_TaxID=8330;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PAX6 SL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              057584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS: PR00027; PAIREDBOX.
ProDom: PD000010; Homeobox; 1.
SMART: SM00389; HOX; 1.
SMART; SM00351; PAX; 1.
                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DNA-binding; Homeobox; Nuclear protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PROSITE; PS00027; HOMEOBOX_1; 1. PROSITE; PS50071; HOMEOBOX_2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00046; homeobox; 1. Pfam; PF00292; PAX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
Paired-box transcription factor ++ isoform (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9PRE6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001356; Homeobox.
InterPro; IPR001523; Paired_box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SUBCELLULAR LOCATION: NUCLEAR (BY SIMILARITY)
EMBL; AF169412; AAD50901.1; -.
HSSP; P26367; 6PAX.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Submitted (JUL-1999) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Glaser T.M., Walton D.S., Cai J., Epstein
"PAX6 gene mutations in aniridia.";
(In) Wiggs J. (eds.);
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ambystoma mexicanum (Axolotl).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleost
Amphibia; Batrachia; Caudata; Salamandroidea; Ambystomatldae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186 PDGCQQQEGGGENTNSISSNGEDSDEAQMRLQLKRKLQRNRTSFTQ 231
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Glaser T.M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           128 NIPSVSSINRVLRNLASEKQQMGADGMYDKLRMLNGQTGTWGTRPGWYPGTSVPG--QPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New York (1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=8296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ambystoma
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    80 PRGSMRKAFAGQNSNTV·····LSRLLARTRKQHKQ 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20 SLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   genetics of ocular disease,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              433 AA; 47687 MW; B61ED5B1E733DB55 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                              Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20,06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8; Score 80.5; D8; Pred. No. 9.7;17; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                          common newt).
Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  438
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   pp.52-82,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ΑA
                                                                                                                                                                                 Takeshima
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             J.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Wiley Press
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jepeal L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Maas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ν
```

```
DR HSSP; P26367; 6PAX.

DR Interpro; IPR001335; Homeobox.

DR Interpro; IPR001535; Paired_box.

DR Pfam; PF00046; homeobox; 1.

DR Pfam; PF00046; homeobox; 1.

DR Pfam; PF000292; PAX; 1.

DR PRINTS; PR00027; HOMEOBOX; 1.

DR SMART; SM00389; HOX; 1.

DR SMART; SM00389; HOX; 1.

DR PROSITE; PS00027; HOMEOBOX_2; 1.

DR PROSITE; PS00034; PAXIED_BOX; 1.

DR PROSITE; PS00034; PAIRED_BOX; 1.

SR PROSITE; PS00034; PAIRED_BOX; 1.

DR PROSITE; PS00034; PAIRED_BOX; 1.

NW Palred box; Transcription regulation.

SQ SEQUENCE 438 AA; 48455 MW; B5146D49048BF511 CRC64;

Query Match

12.6%; Score 80.5; DB 13; Length 438;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Gaps 2;

Query Matches 26; Conservative 17; Mismatches 46; Indels 17; Ga
```

THIS PAGE BLANK (USPTO)

THIS PAGE BLANK (USPTO)

В

```
GAERGDILRKADSSTNIFNPRGNLRKFODFSGODPNILLSHLLARIWKPYKKRET-PDCF 119
                                                                                              GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                               MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                            Score 279.5; DB 9
Pred. No. 1.4e-22;
                                                                                                                                              Mismatches
                                                                                                                                                                           DB 9;
                                                                                                                                                                          Length 124;
                                                                                                                                           Indels
                                                                                                                                          ω
•-
                                                                                                                                        Gaps
                                                                                 60
                                                                                                          .60
                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-993-687-266
                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60
PRIOR FILING DATE: 1997-11-
PRIOR APPLICATION NUMBER: 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 266, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: P2730P1C11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \PPLICAN1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT:
                                                FILING DATE: 1908-0
                                                                   APPLICATION NUMBER: 60/087827
FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/088021
                                                                                                                         APPLICATION NUMBER: 60/087609
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120 WKYCV 124
                              APPLICATION NUMBER: 60/088025
FILING DATE: 1998-06-04
             APPLICATION NUMBER:
                                                                                                                FILING DATE:
                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                 APPLICATION NUMBER: 60/087106
                                                                                                                                                                                                                                APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                            FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 1997-1:
                                                                                                                                                                                                         LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/09/993,687 FILING DATE: 2002-11-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watanabe, Colin K. Williams; P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Roy, Margaret Ann
e+awart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kljavin,Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grimaldi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Application US/09993687
. US20020198149A1
I998-06-04
                         1998-06-04
                                                                                                                1998-06-02
                                                                                                                                                                        1998-06-02
                                                                                                                                                                                                      1998-05-28
                                                                                                                                                                                                                                                              1998-04-28
                                                       1998-06-04
                                                                                                                                                                                                                                                                                                                       1998-02-25
                                                                                                                                                                                                                                                                                                                                                                               1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Danie1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2002-11-14
            60/088026
                                                                                                                                                                                       60/087607
                                                                                                                                                                                                                                                                           60/083322
                                                                                                                                                                                                                                                                                                         60/078910
                                                                                                                                                                                                                                                                                                                                                                                               60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                            60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/062250
```

밁 Š В Q

61 61

119 WKYCI 123

Matches Query Match

Loca1

62; Conser

44.2%;

Conservative

16;

APPLICATION NUMBER: FILING DATE: 1998-07 FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-07-07

1998-07-09 1998-07-07

60/092182 60/091982 PRIOR FILING DATE: 1998-07-02 PRIOR APPLICATION NUMBER: 60/091633

APPLICATION NUMBER: 60/091978

PRIOR

APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:

1998-07-02

60/091626 60/091519 60/091544 60/091478 60/091360 60/090863 60/090862

FILING DATE:

1998-07-02 1998-07-01 1998-07-02 1998-07-01

APPLICATION NUMBER:

APPLICATION NUMBER: FILING DATE FILING DATE:

LING DATE:

FILING DATE:

APPLICATION NUMBER:

1998-06-26 998-06-26

APPLICATION NUMBER:

APPLICATION NUMBER: 60/090696 FILING DATE: 1998-06-25

APPLICATION NUMBER:

FILING DATE: FILING DATE:

1998-06-25 1998-06-25

569060/09

APPLICATION NUMBER: 60/090690 FILING DATE: 1998-05-25
APPLICATION NUMBER: 60/090678

FILING DATE: 1998-06
APPLICATION NUMBER: FILING DATE: 1998-06-24 APPLICATION NUMBER:

1998-06-

60/090676 60/090557 APPLICATION NUMBER: 60/090542 FILING DATE: 1998-06-APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06-APPLICATION NUMBER:

FILING DATE:

1998-06-

60/090540 60/090535 60/090472 APPLICATION NUMBER: 60/090445 APPLICATION NUMBER: 60/090444

.998-06-

FILING DATE: 1998-06-

FILING DATE:

FILING DATE: 1998-06-24 APPLICATION NUMBER: FILING DATE:

APPLICATION NUMBER: 60/

1998-06-

60/090435 60/090431 60/090429 60/090355

APPLICATION NUMBER:

FILING DATE: 1998-00 APPLICATION NUMBER:

APPLICATION NUMBER: 60/090349

1998-06-23

APPLICATION NUMBER: 60/090694 FILING DATE: 1998-06-

APPLICATION NUMBER: FILING DATE: 1998-07

```
US-09-991-181-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence 266, Application US/09991181 publication No. US20020197615A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ashkenazi,Avi J. APPLICANT: Baker,Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: P2730P1C53
CURRENT APPLICATION NUMBER: US/09/991,181
CURRENT FILING DATE: 2001-11-16
PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPL1CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR AFFILING DATE: 1997-11-12
PRIOR APPLICATION NUMBER: 60/065311
PRIOR APPLICATION NUMBER: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/062250 PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPL1CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                         PRIOR
                                         PRIOR PRIOR
                                                                                                                                         PRIOR
                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                         PRIOR
                                                                          PRIOR
                                                                                                                                                                                                                                                                        FILING DATE: 1998-0: APPLICATION NUMBER: 1998-0:
                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/083322
FILING DATE: 1998-04-28
APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-11-24
APPLICATION NUMBER: 60/075945
FILING DATE: 1998-02-25
APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-03-20
                                                                                                                      FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/
                                                                                                                                                                                       FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087759
                                                                                                                                                                                                                                          FILING DATE: 1998-06-02
                                          FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088026
FILING DATE: 1998-06-04
                                                                            FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                           FILING DATE: 1998-06-02
                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                        APPLICATION NUMBER: 60/088028
                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Grimald1, J.Christopher
Gurney, Austin L.
Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Paon1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Daniel
                                                                                                                                                                                                                                                                                                           1998-05-07
                                                                                                                                                                                                                                                                             1998-05-28
                1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colin K
                                                                                                                                                                                                                                                           60/087607
                                                                                                                                                                                                                                                                                             60/087106
                                                                                                                                                                                                                               60/087609
                                                                                                                               60/088021
                                                                                                                                                             60/087827
                                                                                               60/088025
60/088029
```

```
PRIOR FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-00 PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                     PRIOR
                                                                                                                    PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                                                                                                                                                                PRIOR
                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION I
                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-0. PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-06-
                                                          PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-06
                                                                                       PRIOR
                                                                                                                                                    PRIOR
                                                                                                                                                                                PR1OR
                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                           PRIOR
                             PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088202
FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/088030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088810
FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/089105
FILING DATE: 1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088858 FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-16
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/089532 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        F1L1NG DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089514 FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/089440
                                                                                       APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                 FILING DATE:
                                                                                                                                                                              APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                           FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
FILING
               APPLICATION
                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-10
                                                                                                                                                                                                                                                                                                          1998-06-17
                                                                                                                                                                                                                                                                                                                                                                   1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                1998-06-
                                                                                                                                                                                                                   1998-06-18
                                                                                                                                                                                                                                                                             1998-06-17
                                                                                                                        1998-06-19
                                                                                                                                                      1998-06-19
   1998-06-22
                                1998-06-22
                                                              1998-06-
                                                                                           1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198880/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/089512
                                                                                                                                                                                                                                                                                                                                                   60/089599
                                                                                                                                                                                                                               60/089907
                                                                                                                                                                                                                                                                                                                        60/089600
                                                                                                                                                                                                                                                                                                                                                                                60/089598
                   60/090254
                                                                              60/090246
                                                                                                         60/089952
                                                                                                                                        60/089948
                                                                                                                                                                   60/089947
                                                                                                                                                                                                  60/089908
                                                                                                                                                                                                                                                              60/089801
                                                                                                                                                                                                                                                                                           60/089653
                                             60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /088033
```

PRIOR

FILING DATE:

1998-06-10

PRIOR

FILING DATE: APPLICATION NUMBER: FILING DATE:

I998-06-05

1998-06-05 1998-06-05 I998-06-05

PRIOR

FILING DATE: 1998-06 APPLICATION NUMBER:

FILING DATE: APPLICATION NUMBER:

FILING APPLICATION FILING

NUMBER:

1998-06-04

1998-06-04 I998-06-04

APPLICATION NUMBER: DATE:

PRIOR

FILING DATE:

```
APPLICATION NUMBER: 60/089907 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089600
                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-17
APPLICATION NITHERS
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/089599
FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-16
APPLICATION NUMBER: 60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-09
APPLICATION NUMBER: 60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088826
                                    60/090254
                                                                                               60/090246
                                                                                                                               60/089952
                                                                                                                                                            60/089948
                                                                                                                                                                                                                        60/089908
                                                                                                                                                                                                                                                                                     60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                           60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          018880/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088030
                                                                  60/090252
                                                                                                                                                                                          60/089947
                                                                                                                                                                                                                                                                                                                  60/089653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088326
                              Q
                                                                                                                                                     δÃ
                                                               Вb
                                                                                          Q
                                                                                                                          DЬ
                                                                                                                                                            Query Match
Best Local Similarity 45...
Thes 62; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOK AFFILING DATE: 1998-05-25
PRIOR APPLICATION NUMBER: 60/090690
PRIOR APPLICATION 1998-06-25
                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1998-06-25
PRIOR APPLICATION NUMBER: 60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
   I20
                               119 WKYCI 123
                                                              61
                                                                                          19
                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091544
TTTNG DATE: 1998-07-01
TTTNG DATE: 1998-07-01
                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091982
FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/091633
FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091978
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091626
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/091519 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090862
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-01 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-01 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
 WKYCV
                                                                                                                    GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                            GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF
I24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                    44.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090535
                                                                                                                                                                                     16;
                                                                                                                                                                                  Score 279.5; DB 9;
Pred. No. 1.4e-22;
6; Mismatches 44;
                                                                                                                                                                                  Inde1s
                                                                                                                                                                                                               Len9th
                                                                                                                                                                                  ω
```

PRIOR

FILING DATE: 1998-06 APPLICATION NUMBER:

1998-06-12

APPLICATION NUMBER: FILING DATE:

1998-06-16

FILING DATE:

APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE:

1998-06-11 1998-06-10 1998-06-10

FILING DATE:

1998-06-1 1998-06-11 APPLICATION NUMBER:

APPLICATION NUMBER:

1998-06-10 I998-06-IO

FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE:

1998-06-10

PRIOR PRIOR

APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-17

FILING DATE: 1998-06-17

FILING DATE:

1998-06-1

PRIOR PRIOR PRIOR PRIOR PRIOR

FILING DATE: APPLICATION NUMBER

1998-06-1 1998-06-17

PRIOR

APPLICATION

NUMBER:

FILING DATE: 1998-0 APPLICATION NUMBER: F1LING DATE: 1998-0

Gaps

2;

60 60

PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION

NUMBER:

1998-06-19 1998-06-19 I998-06-I8

PRIOR

R FILING DATE: 1998-06
R FAPPLICATION NUMBER:
R FILING DATE: 1998-06
R APPLICATION NUMBER:
R FILING DATE: 1998-06
R APPLICATION NUMBER:

1998-06-19

I998-06-22

APPLICATION NUMBER: FILING DATE: 1998-08 APPLICATION NUMBER:

1998-06-22

FILING DATE:

1998-06-2

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION NUMBER: FILING DATE: 1998-0

```
Ъ
                                                                                            Оy
В
                              á
                                                                                                                                В
                                                                                                                                                                Ş
                                                                                                                                                                                                                  Ouery Match
Best Local
                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
 120 WKYCV 124
                                 119 WKYCI 123
                                                                 61
                                                                                                 6.1
                                                                                                                                                                                                                 Loca1
                                                                                                                                                                 ب
                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/091978
                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/092182 FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091633 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091519 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 6
FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/
FILING DATE; 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF 119
                                                                                                                                                  MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLOLPVLEENALRALEELERTALLQTLRQTV
                                                                                              GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKORKQHGTAPECF 118
                                                                                                                                MYKLASCCLLFTGFLNPLLSLPLLDSREISFOLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                 S1m11arity
                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-
                                                                                                                                                                                                               44.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090540
                                                                                                                                                                                                 16; Mismatches
                                                                                                                                                                                                               Score 279.5; DB 9
Pred. No. 1.4e-22;
                                                                                                                                                                                                                              DB 9;
                                                                                                                                                                                                44;
                                                                                                                                                                                                                              Length 124;
                                                                                                                                                                                                 Inde1s
                                                                                                                                                                                                ω
••
                                                                                                                                                                                              Gaps
                                                                                                                                 60
                                                                                                                                                                                                2
```

```
RESULT 7
US-09-990-436-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P2730PIC14

CURRENT APPLICATION NUMBER: US/08/990,436

CURRENT FILING DATE: 2001-11-14

PRIOR APPLICATION NUMBER: 60/04987

PRIOR FILING DATE: 1997-06-16

PRIOR FILING DATE: 1997-10-17

PRIOR FILING DATE: 1997-10-17

PRIOR APPLICATION NUMBER: 60/065186

PRIOR APPLICATION NUMBER: 60/06511

PRIOR APPLICATION NUMBER: 60/06571

PRIOR APPLICATION NUMBER: 60/066770

PRIOR APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 266, Application US/09990436 Publication No. US20020198148A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R1OR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIOR
                                                      OR APPLICATION NUMBER: 60/08
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/08
OR APPLICATION NUMBER: 60/08
OR APPLICATION NUMBER: 60/08
OR APPLICATION NUMBER: 60/08
                                                                                                                                                                                                                                                                                                                                         R APPLICATION NUMBER: (R FILING DATE: 1998-06 R FILING DATE: 1998-06 R APPLICATION NUMBER: (R APPLICATION NUMBER: R APPLICATION NUMBER: (R APPLICATION NUMBER: (R APPLICATION NUMBER: R APPLICATION NUMBER: R APPLICATION NUMBER: (R APPLICATION NUMBER: R APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/087106
FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1997-11-24 APPLICATION NUMBER: 60/075945
APPLICATION FILING DATE:
                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ashkenazi, Avi J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul J.
Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baker, Kevin P.
Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Paoni, Nicholas F
NUMBER: 60/
: 1998-06-04
                                                                                                                                                                                                                                                                                                                NUMBER: 60/087827
1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Daniel
                                                                                                                                                                                                                                                   1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/087607
                                                                                            60/088028
                                                                                                                                                         60/088026
                                                                                                                                                                                                                                                                            60/088021
                                                                                                                                                                                                                                                                                                                                                                                                         60/087759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/087609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/084600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/078910
                                                                                                                                                                                                                      60/088025
```

RESULT

```
US-09-989-730-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 266, Appropriate Publication No.
                                                                                                                                           PRIOR
                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                      PRIOR
                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/989,730 CURRENT FILING DATE: 2001-11-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730p1C69
                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: PRIOR APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12
                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                   FILING DATE: 1998-0: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
FILING DATE: APPLICATION
                          APPLICATION NUMBER:
                                           FILING DATE:
                                                       FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                APPLICATION NUMBER: 60/088026
                                                                                              FILING DATE: 1998-06-04
                                                                                                              APPLICATION NUMBER:
                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                      FILING DATE: 1998-06-03
                                                                                                                                                                                                APPLICATION NUMBER: 60/087759
                                                                                                                                                                                                                FILING DATE: 1998-06-02
                                                                                                                                                                                                                             FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                             APPLICATION N
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Watanabe, Colin K. Williams, P. Mickey Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grimaldi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fong,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09989730 o. US20020197674A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Margaret Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sherman
                                                                                                                                                                                                                                                                                                                                          NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-10-17
                                       1998-06-04
                                                                                                                                                                                1998-06-02
                                                                                                                                                                                                                                         1998-06-02
           1998-06-04
                                                                    1998-06-04
                                                                                                                          1998-06-04
                                                                                                                                                                                                                                                                       1998-05-28
                                                                                                                                                                                                                                                                                                  1998-05-07
                                                                                                                                                                                                                                                                                                                            1998-04-28
                                                                                                                                                                                                                                                                                                                                                         1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Daniel
                                                                                                                                                                                                                                                                                                                                                                                     1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ט'
                          60/088029
                                                     60/088028
                                                                                                           60/088025
                                                                                                                                         60/088021
                                                                                                                                                                                                                                                      60/087607
                                                                                                                                                                                                                                                                                                             60/084600
                                                                                                                                                                    60/087827
                                                                                                                                                                                                                            60/087609
                                                                                                                                                                                                                                                                                   60/087106
                                                                                                                                                                                                                                                                                                                                                                     60/078910
```

PRIOR R FILING DATE:
R APPLICATION N
R FILING DATE: FILING DATE: 1998-06 APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:
FILING DATE: 1998-0 FILING DATE: APPLICATION N FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION APPLICATION NUMBER: 60/090252 FILING DATE: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: 60/089598 FILING DATE: 1998-06-17 FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/089514 APPLICATION NUMBER: 60/089512 FILING DATE: 1998-06-16 FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/088876 APPLICATION NUMBER: 60/088861 APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/088858 FILING DATE: APPLICATION NUMBER: 60/088826 FILING DATE: APPLICATION NUMBER: 60/088824 FILING DATE: APPLICATION NUMBER: 60/088742 APPLICATION NUMBER: 60/088734 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/088810 FILING DATE: FILING DATE: APPLICATION NUMBER: 60/088655 FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: LING DATE: LING DATE: LING DATE: NUMBER: NUMBER: 60/089801: 1998-06-18 NUMBER: NUMBER: 1998-06-22 1998-06-19 1998-06-17 1998-06-22 IUMBER: 60/089952 1998-06-19 1998-06-19 1998-06-22 1998-06-18 1998-06-17 1998-06-17 1998-06-16 1998-06-16 1998-06-11 1998-06-10 1998-06-10 1998-06-10 1998-06-05 1998-06-05 1998-06-17 1998-06-10 1998-06-05 1998-06-05 1998-06-04 1998-06-04 1998-06-1 1998-06-10 998-06-18 1998-06-17 1998-06-12 1998-06-04 998-06-09 998-06-10 60/089948 60/090254 60/090246 60/089947 80/089908 60/089907 60/089653 60/089600 60/089599 60/089538 60/089532 60/089440 60/089105 60/088738 60/088217 60/088212 60/088202 60/088167 60/088326 60/088033

PRIOR PRIOR

FILING DATE: 1998-0 APPLICATION NUMBER:

FILING DATE:

1998-06-10 1998-06-10

60/088738

APPLICATION NUMBER: 60/088734

PRIOR

FILING DATE: 1998-0 APPLICATION NUMBER: F1LING DATE: 1998-0

1998-06-10 1998-06-10

60/088826

858880/09

FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/ APPLICATION NUMBER: 60/088810 APPLICATION NUMBER: 60/088742

60/088824

APPLICATION NUMBER: 60/088861 FILING OATE: 1998-06-11 APPLICATION NUMBER: 60/088876 FILING DATE: 1998-06-11

FILING DATE: 1998-06-APPLICATION NUMBER: PRIOR

PRIOR

APPLICATION NUMBER:

1998-06-05 1998-06-05

60/088212

FILING DATE:

APPLICATION NUMBER: 60/088217

FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088655

FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088167
FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088202

APPLICATION NUMBER: 60/088033 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088326

60/088033

```
δ
                                                     Db
                                                                             οy
                                                                                                             B
                                                                                                                                     9
B
                                                                                                                                                                   Matches
                                                                                                                                                                                Ouery Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-06-23
PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PR10R
                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                         119 WKYC1 123
120 WKYCV
                                                      61
                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090690 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/090542
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 1998-07 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                          APPLICATION NUMBER: 60/092182 FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                   FILING DATE:
                                                   GAERGDILRKADSSTNIFNPRGNLRKFODFSGODPNILLSHLLARIWKPYKKRET-PDCF
                                                                                                                        MDRVPFCCLLFVGLLNPLLSFPYTDTGEMSLOLPVLEENALRALEELERTALLOTLRQTV 60
                                                                      GTEAEGSLGOADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKORKOHGTAPECF 118
                                                                                                           l Similarity
62; Conserv
I24
                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-24
                                                                                                                                                                                                                                                                                   1998-07-07
                                                                                                                                                                                                                                                                                                                                          1998-07-02
                                                                                                                                                                                                                                                                                                                                                                     1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                           1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-07-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                  44.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/09043I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                        60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090535
                                                                                                                                                                                                                                                                     60/091982
                                                                                                                                                                                                                                                                                                60/091978
                                                                                                                                                                                                                                                                                                                           60/091633
                                                                                                                                                                                                                                                                                                                                                       60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/091360
                                                                                                                                                                      ; 6 I
                                                                                                                                                                   Score 279.5; DB 9; Pred. No. 1.4e-22; 6; Mismatches 44;
                                                                                                                                                                                                Length
                                                                                                                                                                       Indels
```

PRIOR PRIOR

APPLICATION NUMBER: 60/089908 FILING DATE: 1998-06-18 APPLICATION NUMBER: 60/089947

124; ω ••

Gaps

2

PR1OR PR10R

FILING DATE: 1998-06-18 APPLICATION NUMBER: 60/089907 FILING DATE: 1998-06-18

DR APPLICATION NUMBER: 60/089105
DR FILING DATE: 1998-06-12
DR APPLICATION NUMBER: 60/089440
DR FILING DATE: 1998-06-16
DR APPLICATION NUMBER: 60/089512
DR APPLICATION NUMBER: 60/089512
DR FILING DATE: 1998-06-16
DR APPLICATION NUMBER: 60/089532
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089538
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089598
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089598
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089599
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089590
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089590
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089590
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089593
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089600
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089653
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089653
DR FILING DATE: 1998-06-17

PR1OR

PRIOR

PRIOR

APPLICATION NUMBER: 60 FILING DATE: 1998-06-APPLICATION NUMBER: 60/(FILING DATE: 1998-06-22

FILING DATE: 1998-06-22 APPLICATION NUMBER: FILING OATE: APPLICATION NUMBER: FILING DATE:

60/090254 60/090349

FILING DATE: APPLICATION

PRIOR PRIOR

APPLICATION NUMBER: FILING DATE: 1998-06

60/089948

APPLICATION NUMBER: 60/089952

1998-06-19 1998-06-1998-06-19

1998-06-22

60/090252 60/090246 PRIOR

F1L1NG OATE:

60/090429

```
Qy
                         δÃ
                                                      Вþ
                                                                                 δÃ
                                                                                                            Ъ
Вþ
                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                  Matches
                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                           119
120 WKYCV 124
                                                      61
                                                                                 61
                                                                                                                                       ш
                                                                                                                                                                                                                        F1LING DATE:
                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091978
                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091478 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                 F1L1NG DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F1L1NG DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F1L1NG DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPL1CATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION
                                                                                                                      MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                 GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                      MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQ1LPEML 60
                         WKYCI 123
                                                 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF 119
                                                                                                                                                                 l Similarity
62; Conser
                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER:
                                                                                                                                                                                                                        1998-07-09
                                                                                                                                                                                                                                                   1998-07-07
                                                                                                                                                                                                                                                                                                                                    1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                           1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-25
                                                                                                                                                                                                                                                                                                                                                                1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-24
                                                                                                                                                                           44.28;
                                                                                                                                                                                                                                     60/092182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090540
                                                                                                                                                                                                                                                               60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090431
                                                                                                                                                               16;
                                                                                                                                                              Score 279.5;
Pred. No. 1.4e
16; Mismatches
                                                                                                                                                                             .4e-22;
                                                                                                                                                                                          DB
                                                                                                                                                               44;
                                                                                                                                                                                         9
                                                                                                                                                                                         Length
                                                                                                                                                              Indels
                                                                                                                                                                                          124;
                                                                                                                                                               ω,
                                                                                                                                                              Gaps
                                                                                                                                                               ν,
```

RESULT

G

```
US-09-990-444-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 266, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                         PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/065186 PRIOR FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/990,444
CURRENT FILING DATE: 2001-11-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Secretation: OF INVENTION: Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ashkenazi,Avi J
                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPL1CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPL1CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
R FILING DATE: 1998-06
R APPLICATION NUMBER: '
R FILING DATE: 1998-06
R FILING DATE: 1998-06
R FILING DATE: 1998-06
                                                                                  APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
                                                                                                                                      FILING DATE:
                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/087759 FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/087607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INVENTION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Williams, P. Mic Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Paoni, Nicholas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen,Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09990444 b. US20020193300A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Margaret Ann art, Timothy A.
                  NUMBER: 60/088030
                                                                                                                                                                                                                                                                                                                                                                                                            1998-04-28
                                                                                                                                    1998-06-04
                                                                                                                                                                                                                                                                         1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-02-25
   1998-06-04
                                                                      1998-06-04
                                                                                                                                                                                                       1998-06-03
                                                                                                                                                                                                                                                                                                         1998-06-02
                                                                                                                                                                                                                                                                                                                                          1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-03-20
                                                                                                                                                                       1998-06-04
                                    1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Colin K.
P. Mickey
                                                                                    60/088028
                                                                                                                     60/088026
                                                                                                                                                    60/088025
                                                                                                                                                                                      60/088021
                                                                                                                                                                                                                       60/087827
                                                                                                                                                                                                                                                                                      60/087609
                                                                                                                                                                                                                                                                                                                                                          60/087106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/062250
                                                   60/088029
                                                                                                                                                                                                                                                                                                                                                                                                                         60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ħ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               and Transmembrane Polypeptides and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nucleic
```

```
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 266, A Publication No.
                                                                                                                                                  PRIOR PRIOR
                                                                                                                                                                                                                                        PRIOR PRIOR
                                                                                                                                                                                                                                                                     PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                         PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ashkenazi, Avi J. APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPL1CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    \PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1998-01 APPLICATION NUMBER:
                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087609
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12
                                                                                      APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/
FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 1998-03
                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
             FILING DATE: 1998-00
APPLICATION NUMBER:
FILING DATE: 1998-00
                                                                        F1LING DATE: 1998-06-04
                                                                                                                                    FILING DATE: 1998-06-04
                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/09/989,735 FILING DATE: 2001-11-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watanabe, Colin K. Williams, P. Mickey Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kljavin,Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Botsteln, Davld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Paoni, Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09989735
o. US20020193299A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P2730P1C61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Margaret Ann
art, Timothy A
                                          1998-06-04
                                                                                                                                                                                              1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                          1998-03-20
                                                                                                        1998-06-04
                                                                                                                                                                 1998-06-04
                                                                                                                                                                                                                            1998-06-02
                                                                                                                                                                                                                                                                                                                                                                            998-04-28
                              60/088030
                                                                                                                                                                                                                                                                                                                                                                                         60/083322
                                                          60/088029
                                                                                         60/088028
                                                                                                                     60/088026
                                                                                                                                                  60/088025
                                                                                                                                                                               60/088021
                                                                                                                                                                                                           60/087827
                                                                                                                                                                                                                                        60/087759
                                                                                                                                                                                                                                                                                                                                60/087106
                                                                                                                                                                                                                                                                                                                                                            60/084600
                                                                                                                                                                                                                                                                                                                                                                                                                      60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
                                                                                                                                                                                            PR1OR
                                                                                                                                                                                                                                                                     PRIOR PRIOR
                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PR10R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                      RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
    FILING DATE:
    APPLICATION N
    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-00
APPLICATION NUMBER:
FILING DATE: 1998-00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06
APPLICATION NUMBER:
                                           FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                        F1LING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                     APPLICATION NUMBER:
                                                                                                                     FILING DATE:
                                                                                                                                FILING DATE: 1998-06-19
APPLICATION NUMBER: 60/090246
                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/089908
                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089907 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089599
FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F1LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/088876 FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/088824 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/088742 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/088734 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/088167
                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F1LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                           : 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER: 60/088738
1998-06-10
                                                                                                                     1998-06-
                                                                                                                                                                                                                                                                                                   1998-06-18
                                                                                                                                                                                                                                                                                                                                                            1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-04
                            1998-06-23
                                                                                       1998-06-22
                                                                                                                                                                               1998-06-19
                                                                                                                                                                                                           1998-06-19
                                                                                                                                                                                                                                        1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-17
                                                                                                                                                                                                                                                                                                                           UMBER: 60/089653
1998-06-17
                                                          1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088655
                                           60/090349
                                                                                                     60/090252
                                                                                                                                                                60/089952
                                                                                                                                                                                            60/089948
                                                                                                                                                                                                                         60/089947
                                                                                                                                                                                                                                                                                                               60/089801
                                                                                                                                                                                                                                                                                                                                                                         60/089600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089512
               60/090355
                                                                        60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/089440
```

FILING

1998-06-24

```
PRIOR PRIOR
                                                                                              PRIOR
  PRIOR
                                                PRIOR
                                                                                                                                 PRIOR
                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                     RIOR
                                                                                                                                                                                                                                                                                                                                                               RIOR
                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                       R FILING DATE: 1998-06
R APPLICATION NUMBER: (
R FILING DATE: 1998-06:
R APPLICATION NUMBER: (
                                                  FILING DATE: 1998-00-2-
(APPLICATION NUMBER: 60/C
-- THO DATE: 1998-06-22
                                                                                                                                                                                                                                       R FILING DATE:
R APPLICATION N
R FILING DATE:
R APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R APPLICATION N
R FILING DATE:
R APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION N
FILING DATE:
APPLICATION N
                                                                                                                   FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                           FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                         FILING DATE: APPLICATION N
                                                                                            FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                  FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                      FILING DATE: APPLICATION N
                                                                                                                                                                                                                                                                                                              FILING DATE: APPLICATION |
                                                                                                                                                                                                                                                                                                                                     FILING DATE: APPLICATION |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
APPLICATION
             FILING
                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING
                                                                                                                                                                                                                                                                                                                                                                                                                       LING DATE:
                                                                                                                                                                                         NUMBER:
                                                                                                                                                                                                                                        NUMBER:
                                                                                                                                                                                                                                                               NUMBER:
                                                                                                                                                                                                                                                                                        NUMBER:
                                                                                                                                                                                                                                                                                                               NUMBER:
                                                                                                                                                                                                                                                                                                                                      NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                     NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER:
                                                                                                                                                                                                                                                                                           1998-06-17
                                  1998-06-23
                                                                                                                               1998-06-19
                                                                                                                                                      1998-06-19
                                                                                                                                                                                                   1998-06-18
                                                                                                                                                                                                                            1998-06-18
                                                                                                                                                                                                                                                                          1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-05
                                                                                                                                                                             1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-
                                                                                                     UMBER: 60/090246
1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UMBER: 60/089105
1998-06-12
                                                                                                                                                                                                                                                   .998-06-1
                                                                                                                                                                                                                                                                                                                          .998-06-17
                                                                                                                                                                                                                                                                                                                                                                        .998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                .998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .998-06-3
             998-06-
                                                                                                                                                                                                                                                                                                                                                 998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     998-06-16
                                                                                            60/090252
                       60/090355
                                              60/090349
                                                                     60/090254
                                                                                                                                          60/089952
                                                                                                                                                                                        60/089947
                                                                                                                                                                                                                806680/09
                                                                                                                                                                                                                                       60/089907
                                                                                                                                                                                                                                                                                     60/089653
                                                                                                                                                                                                                                                                                                                                                                                   60/089538
                                                                                                                                                                                                                                                                                                                                                                                                           60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088202
 60/090429
                                                                                                                                                                 60/089948
                                                                                                                                                                                                                                                              60/089801
                                                                                                                                                                                                                                                                                                                                    60/089599
                                                                                                                                                                                                                                                                                                                                                           60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                                  60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/088326
```

```
PRIOR
                                                          PRIOR
                                                                       PRIOR
                                                                                      PRIOR
                                                                                                                              PRIOR
                                                                                                                                            PRIOR
                                                                                                                                                            PRIOR
                                                                                                                                                                       PRIOR
                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE:
                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIOR
                                                                                                                                                                                                                                                                                                                                                          RIOR
                                                                                                                                                                                                                                                                                                                                                                                      ŘIOR
                                                                                                                                                                                                                                                                  R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R APPLICATION NUMBER: 6
R FILING DATE:
R APPLICATION N
R FILING DATE:
                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-07 APPLICATION NUMBER:
                                         FILING DATE: 1998-07 APPLICATION NUMBER:
                                                                    FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091978
                                                                                              FILING DATE: 1998-07
APPLICATION NUMBER:
                                                                                                                            APPLICATION NUMBER: 60/091626
                                                                                                                                            FILING DATE:
                                                                                                                                                       APPLICATION NUMBER: 60/091519
                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                   APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
NUMBER: 60/092182
: 1998-07-09
                            1998-07-07
                                                                                                                                            1998-07-02
                                                                                                                                                                                                  1998-07-02
                                                                                                                                                                                                                                                         1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                       1998-07-07
                                                                                                               1998-07-02
                                                                                                                                                                       1998-07-01
                                                                                                                                                                                                                                                                                   1998-06-26
                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                         1998-06-25
                                                                                                                                                                                                                                                                                                                                                                    1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-24
                                                                                                                                                                                                                              1998-07-01
                                                                                                60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090676
                                         60/091982
                                                                                                                                                                                                              60/091478
                                                                                                                                                                                                                                         60/091360
                                                                                                                                                                                                                                                                    60/090863
                                                                                                                                                                                                                                                                                                60/090862
                                                                                                                                                                                                                                                                                                                                                        60/090695
                                                                                                                                                                                                                                                                                                                                                                                 60/090694
                                                                                                                                                                                                                                                                                                                                                                                                              60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090431
                                                                                                                                                                                                                                                                                                                         60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090540
```

Вb οy 밁 ОĀ οy Query Match Best Local Matches 119 61 61 н _ WKYCV MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLOLPVLEENALRALEELERTALLQTLROTV 60 WKYCI 123 GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118 MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF 1 Similarity 62; Conserv Conservative 44.28; 49.68; 16; Score 279.5; DB 9 Pred. No. 1.4e-22; Mismatches 44; 9; Length Inde1s 124; Ψ Gaps

60

2

망

120

```
8
                                                                                                                                                                                                                                                                 Š
 RESULT 3
US-09-989-293A-266
; Sequence 266, Application US/09989293A
                                                                                           В
                                                                                                                         Š
                                                                                                                                                               DЬ
                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIQR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                             119
                                                                                           120
                                                                                                                                                               61
                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                     / Match 44.2%;
Local Similarity 49.6%;
nes 62; Conservative
                                                                                                                                                                                                                                   ب
                                                                                                                                                                                                                                                                     \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 6 FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/090472 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-26
APPLICATION NUMBER: 60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090431 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-02
                                                                                           WKYCV 124
                                                                                                                           WKYCI 123
                                                                                                                                                                                                                                                                   MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                               MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                             GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF 119
                                                                                                                                                                                         GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090435
                                                                                                                                                                                                                                                                                                   ; Score 279.5; DB 9
; Pred. No. 1.4e-22;
16; Mismatches 44
                                                                                                                                                                                                                                                                                                                                       DB 9;
                                                                                                                                                                                                                                                                                                       44;
                                                                                                                                                                                                                                                                                                                                     Length 124;
                                                                                                                                                                                                                                                                                                       indels
                                                                                                                                                                                                                                                                                                       ω
••
                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                       2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Patent No. US20020177164Al GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CURRENT APPLICATION NUMBER: US/09/989,293A CURRENT FILING DATE: 2001-I1-20 PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-66-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/062250 PRIOR FILING DATE: 1997-10-17 PRIOR APPLICATION NUMBER: 60/065186 PRIOR FILING DATE: 1997-11-12 PRIOR APPLICATION NUMBER: 60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                     PRIOR
                                                                                                                                           PRIOR
                                                                                                                                                                             PRIOR
                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                       PRIOR
                                                                                                                           PRIOR
                                                                                                                                                             PRIOR
                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1998-06-02
PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-0
PRIQR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-05-07
PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-04-28
PRIOR APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1998-0: PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-11-24
PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1997-11-13
PRIOR APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
R APPLICATION NUMBER: (
R FILING DATE: 1998-06-
RR FILING DATE: 1998-06-
RR FILING DATE: 1998-06-
RR FILING DATE: 1998-06-
                                                                                                                                                                                                             FILING DATE: 1998-0
APPLICATION NUMBER:
FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                         FILING DATE:
                                                                                                                           APPLICATION NUMBER:
                                                                                                                                         APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04
                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                               APPLICATION NUMBER: 60/088025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   watanabe, Coli
Williams, P. M
Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney, Austin I
Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Botstein,David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Paoni, Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Margaret Ann
   NUMBER: 60/088033
: 1998-06-04
                                   1998-06-04
                                                                                                                                                                             1998-06-04
                                                                                                                                                                                                               1998-06-04
                                                                                                         1998-06-04
                                                                                                                                                                                                                                                                                                                     1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                            1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-02-25
                                                                     1998-06-04
                                                                                                                                                                                                                                                   1998-06-03
                                                                                                                                                                                                                                                                                                                                                       1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Colin K
                                                                                                                           60/088028
                                                                                                                                                                                                                                                                                                     60/087759
                                                                                                                                                                                                                                                                                                                                         60/087609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/078910
                                                     60/088030
                                                                                       60/088029
                                                                                                                                                                                                                                 60/088021
                                                                                                                                                                                                                                                                   60/087827
                                                                                                                                                                                                                                                                                                                                                                         60/087607
                                                                                                                                                                                                                                                                                                                                                                                                             60/087106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H
```

```
PRIOR
                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-11-1
PRIOR APPLICATION NUMBER: 60
PRIOR FILING DATE: 1997-11-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INF
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: SecretariTLE OF INVENTION: Acids FILE REFERENCE: P2730P1C20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/992,598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                         R APPLICATION N
R FILING DATE:
                                                                                                                                                             APPLICATION NUMBER:
FILING DATE: 1998-06
APPLICATION NUMBER:
                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-00
                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1998-0
                    APPLICATION NUMBER: FILING DATE: 1998-0
                                              FILING DATE:
                                                         APPLICATION NUMBER:
                                                                         APPLICATION FILING DATE:
                                                                                                 FILING DATE:
                                                                                                                  APPLICATION
                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/066770
FILING DATE: 1997-11-24
APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1997-06-16
APPLICATION NUMBER: 60/062250
FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Roy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Paoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grimaldi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Botstein, David
                                                                                     NUMBER:
                                                                                                                                         NUMBER:
                                                                                                               NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Margaret Ann
art, Timothy A.
                                             1998-06-04
                   1998-06-04
                                                                      1998-06-04
                                                                                                1998-06-04
                                                                                                                          1998-06-04
                                                                                                                                                     1998-06-04
                                                                                                                                                                                1998-06-04
                                                                                                                                                                                                          1998-06-03
                                                                                                                                                                                                                                     1998-06-02
                                                                                                                                                                                                                                                                                                                   1998-05-
                                                                                                                                                                                                                                                               1998-06-02
                                                                                                                                                                                                                                                                                         1998-06-02
                                                                                                                                                                                                                                                                                                                                           1998-05-07
                                                                                                                                                                                                                                                                                                                                                                      1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                            998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acids Encoding the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2001-11-1
                            60/088033
                                                        60/088030
                                                                                  60/088029
                                                                                                             60/088028
                                                                                                                                                                                                                   60/087827
                                                                                                                                    _60/088026
                                                                                                                                                                                           60/088021
                                                                                                                                                                 60/088025
                                                                                                                                                                                                                                              60/087759
                                                                                                                                                                                                                                                                                                                                                       60/084600
                                                                                                                                                                                                                                                                          60/087609
                                                                                                                                                                                                                                                                                                    60/087607
                                                                                                                                                                                                                                                                                                                              60/087106
                                                                                                                                                                                                                                                                                                                                                                                   60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ر</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Same
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1998-06
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1998-06
PRIOR APPLICATION NUMBER: 6
```

PRIOR FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: FILING DATE: 1998-06-19 APPLICATION NUMBER: 60/089948 FILING DATE: 1998-06 APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: FILING DATE: 1998-00 10
APPLICATION NUMBER: 60/089512
TTTING DATE: 1998-06-16
CO /089514 APPLICATION NUMBER: APPLICATION NUMBER: 60/089599 FILING DATE: 1998-06-17 APPLICATION NUMBER: FILING DATE: 1998-00 FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: R FILING DATE: 1
R APPLICATION NI
R FILING DATE: FILING DATE: FILING DATE: 1998-06-11
APPLICATION NUMBER: 60/088861 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-APPLICATION NUMBER: 60/088876 FILING DATE: APPLICATION FILING DATE: FILING DATE:
APPLICATION N FILING DATE: FILING DATE: 1998-01 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: 60/088217 APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-05 FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER: NUMBER: 1998-06-19 1998-06-NUMBER: 1998-06-18 1998-06-18 1998-06-17 1998-06-17 1998-06-17 1998-06-17 1998-06-17 1998-06-NUMBER: 1998-06-1 1998-06-998-06-22 1998-06-1 1998-06-1998-06-10 1998-06-10 1998-06-05 1998-06-12 1998-06-10 1998-06-10 1998-06-10 1998-06-05 1998-06-04 1998-06-05 998-06-09 60/090252 60/090246 60/089952 60/089947 806680/09 60/089907 60/089801 60/089653 60/089600 965680709 60/089532 60/089105 60/089538 60/089514 60/089440 60/088858 60/088826 60/088824 60/088810 60/088742 60/088738 60/088734 60/088655 60/088212 60/088167 _088202

FILING DATE: 1998-06-22 APPLICATION NUMBER: 60/090254 FILING DATE: 1998-06-22

1998-06-23

1998-06-23

60/090355 60/090349

1998-06-24

60/090429

```
Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                               Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Scoring table:
                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    on:
                                                                                                                                                                                                  ö
Pred. No. is the number of results predicted by chance to have a
score greater than or equal to the score of the result being printed,
and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB
 289
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
279.5
                                                                                                                                                                                                 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        seq length: 0
seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   March 10, 2003, 17:38:48; Search time 9.64054 Seconds (without alignments) 538.033 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-831-907A-30
633
1 MDRVPFCCLLFVGLLNPLLS......TRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                          3:
4::
5::
6::
7::
10::
110::
112::
113::
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        188354 seqs, 42170167 residues
                                                                                                                                                                                                  Match Length DB
                                                                                                                                                                                                            Query
                                                                                                                                                                                                                                                                                                                                                                                                                                 Published_Applications_AA:*
 444.22
444.24
444.26
444.26
444.26
444.26
444.26
444.26
444.26
444.26
444.26
444.26
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                          /cgn2_6/ptcdata/1/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptcdata/1/pubpaa/US06_PUBCOMB.pep:*
/cgn2_6/ptcdata/1/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptcdata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptcdata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptcdata/1/pubpaa/PCTUS_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                              /cgn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_puBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                             /cgn2_6/ptodata/1/pubpaa/PCT
                                                                                                                                                                                                                                                                                         /cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US60_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*
 0 US-09-854-105-2
US-09-992-598-266
US-09-998-293A-266
US-09-999-735-266
US-09-990-444-266
US-09-990-436-266
US-09-991-181-266
US-09-991-181-266
US-09-991-687-266
US-09-991-653-266
US-09-997-653-266
US-09-990-438-266
US-09-990-438-266
US-09-997-428-266
US-09-997-428-266
                                                                                                                                                                                                     Ħ
                                                                                                                                                                                                                                   SUMMARIES
                                                                                          Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                                       Description
                               Sequence
Sequence
Sequence
Sequence
Sequence
                                                                                                                                                                                    Sequence
```

45	44	43	42	41	40		ى د د	ω ·	ر ا	36	ယ္ဟ	34	ა ა	32	31	30	29	28	27	26	25	24	23	22	21	20)
68	69	69	69.5	1.0	12.0) ·	7).	70.5	72.5	72.5	72.5	72.5	72.5	72.5	81.5	279.5	279.5	279.5	279.5			279.5		79.		279.5	1
10.7	10.9	•	11.0	11.6	, i	n (1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			11.5	11.5	11.5	11.5		12.9	44.2	44.2		44.2		44.2	44.2	44.2	.44.2	44.2	44.2	
1155	2249	0690	185	4 0		0 0	203	893	893	893	708	677	610	610	906	124	124	124	124	124	124	124	124	124	124	124	ن د د
œ	ی د	y C	u	5	ى ر د	۰ ر	٥	ڡ	9	ဖ	ڡ	9	9	9	ص	10	10	10	D	10	10		10	10	10	-	0 0
US-09-/38-626-5/64	1000	05-10-11/-004-0	05-09-9/0-2004-6	16 00-075-130-A	115-00-015-343-11370	09-891	-09-891-332A-	332A-	US-09-891-332A-6	US-09-891-332A-2	-332A-	-168-60-		891-3	-09-/12-363-2	05-09-969-721-200	US-09-990-436-266	US-09-993-604-200	05-09-341-169-200	-09-990-442	166-60-	25/-686-60-	15/-686-60-	-/2/-686-60-	-6/7-686-60-		115-09-989-723-266
Seduceroe Story	57		5 .		Ð	Sequence 9, Appli	Sequence 8, Appl1		Ó		د	ηų.	٠ <u>١</u>			21200	S 10	sequence 266. App	266.	255	Sequence 266. App	266	266.		200	266.	Sequence 266, App

ALIGNMENTS

```
; ORGANISM: MACACA FASCICULARIS US-09-854-105-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-854-105-2
                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                              Db
                                                                                                                                                                                                                                                                                                                 5
US-09-992-598-266

US-09-992-598-266, Application US/09992598

; Sequence 266, Application US/09992598

; Patent No. US20020160384A1
                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 2, Application US/09854105
Patent No. US20020058323A1
GENERAL INFORMATION:
APPLICANT: Elshourbegy, Nabil
APPLICANT: Shabon, Usman
TITLE OF INVENTION: MONKEY UROTENSIN II
FILE REFERENCE: GP-70694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: FastSEQ for Windows Version SEQ 1D NO 2
LENGTH: 125
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                               Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT FILING DATE: 2001-05-11
PRIOR APPLICATION NUMBER: 60/203,470
PRIOR FILING DATE: 2000-05-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION NUMBER: US/09/854,105
CURRENT FILING DATE: 2001-05-11
                                                                                                                                                          118 FWKYCI 123
                                                                                                                     120 FWKYCV 125
                                                                                                                                                                                                                                                                                                                                                     7 Match 45.7%; Score 289; DB 10; Local Similarity 50.8%; Pred. No. 1.4e-23; nes 64; Conservative 17; Mismatches 41.
                                                                                                                                                                                                  61
                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                               1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTL-RQT 59
                                                                                                                                                                                                LGAERGDSLRKADSSTNIFNPRGNLRKFODFSGODPDILLSHLLARIRKPYKKRET-PDC 119
                                                                                                                                                                                                                          VGTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPEC 117
                                                                                                                                                                                                                                                                                HYKLASCCLLFIGFLNPLFSLPLLDSGEVSLQLSAPHEDAPLTSBELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                     41;
                                                                                                                                                                                                                                                                                                                                                                                                       Length 125;
                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                     4.
                                                                                                                                                                                                                                                                                                                                                                     Gaps
```

ω

US-09-989-726-266 US-09-989-722-266 US-09-990-711-266

Sequence : Sequence

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-019-160-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/07977434 Patent No. 5466591
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 11.5%; Score 72.5; DB 4; Best Local Similarity 28.9%; Pred. No. 6.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -07-977-434-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEFAX: 202-371-2540 INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: Esmond, Robert W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Gelfand, Davld H.
APPLICANT: Abramson, Richard D.
TITLE OF INVENTION: 5' TO 3' EXONUCLEASE MUTATIONS OF
TITLE OF INVENTION: THERMOSTABLE DNA POLYMERASES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 590,466
                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: WordPerfect 2.1 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 5:
FILING DATE: 28-SEP-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
FILING DATE: 17-JUN-1987 PRIOR APPLICATION DATA:
                                                      FILING DATE: 12-JAN-PRIOR APPLICATION DATA:
                                                                                                                                                                                                    APPLICATION NUMBER: US 590,466
FILING DATE: 28-SEP-1990
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 590,213
                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    628 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           569 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASEH 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      64 ----AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24 TDTGEMSLQLPVLEENA-------LRALEELERTALLQTLRQTVGTE------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: New Jersey
ZIP: 07110-1199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRANDEDNESS:
TOPOLOGY: no
                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                       APPLICATION NUMBER:
                                                                                           APPLICATION NUMBER:
                                                                                                                                FILING DATE:
                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                       FILING DATE: 28-SEP-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nutley
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     893 amino aclds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           340 Kingsland Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202-371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maclntosh
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hoffmann-La Roche Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Floppy dlsk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   not relevant
                                                                          UMBER: US 143,441
12-JAN-1988
                                                                                                                                15-MAY-1990
                                                                                                                                                   US 523,394
                                                                                                                                                                                                                                                                                                                us 590,490
                                         US 063,509
                                                                                                                                                                                                                                                                                                                                                                                         US/07/977,434
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32,893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0942.4250002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    63
```

62

ហ

```
밁
                                                                                                       Š
                                                                                                                                          В
                                                                                                                                                                          δÃ
Search completed: March 10, 2003, 17:48:12 Job time : 12.3027 secs
                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                              Best Local Similarity
Matches 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 4
FILING DATE: 22-DEC-1989
                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION: TELEPHONE: (510) 814-2972
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Luann Cserr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 02-NOV-1990 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: protein
                                                                     629 TGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQDPN 666
                                                                                                                                         569 TKTGDYSTRIEVLEELAGEHEIIPLILEYRKIQKLKSTYIDALPKMVNPKTGRIHASFNQ 628
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 21-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 899,241 FILING DATE: 22-AUG-1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                     63 -- EAEGSLGQADPSAE---TPTPRG-SLRKALTGQDSN 94
                                                                                                                                                                          24 TDTGEMSLQLPVLEENA------LRALEELERT---ALLQTLRQTVGT------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 557,517 FILING DATE: 24-JUL-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: Case No. 5466591 8753
                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 31,822
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                     ENGTH:
                                                                                                                                                                                                                                                                                                                                   amino acid
                                                                                                                                                                                                                                                                                                                                                     893 amino acids
                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                       linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           JMBER: US 585,471
20-SEP-1990
                                                                                                                                                                                                                                 11.3%;
28.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 609,157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO PCT/US90/07641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 746,121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US 455,611
                                                                                                                                                                                                                                       Score 71.5;
Pred. No. 9;
                                                                                                                                                                                                                                 Pred. No.
                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                     28;
                                                                                                                                                                                                                                                   Length 893;
                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                     27;
                                                                                                                                                                                                                     Gaps
```

υ • •

```
밁
                                                                                                                                                                                                                                                                                                                                                                                    US-09-019-160-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           us-09-019-160-7
                                                                                                                                                                                                                                                                                                                                     Sequence 8, Application US/09019160 Patent No. 6306588 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                     Sequence 8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 202-371-2540 INFORMATION FOR SEQ ID NO: 7: SEQUENCE CHARACTERISTICS:
                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compartible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                              TITLE OF INVENTION: Polymerases for Analyzing or Typing Polymorphic TITLE OF INVENTION: Nucleic Acid Fragments and Uses Thereof NUMBER OF SEQUENCES: 93
                             CURRENT APPLICATION DATA:
                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 09.
TELECOMMUNICATION INFORMATION:
TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOPTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                           628 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      569 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFH 62
                                                                                                                                                                     STREET: 1100 New CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
                                                                                                                                ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       64 ---AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                APPLICATION NUMBER:
                                                SOFTWARE:
                                                                                                                                           COUNTRY:
                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     24 TDTGEMSLQLPVLEENA------LRALEELERTALLQTLRQTVGTE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Esmond, Robert REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 6 FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE:
                                                                                                                              20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                            R
                                                                                                                                                                                  E: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C 1100 New York Ave., N.W., Suite 600
                                                                                                                                             USA
                                                                                                                                                                                                                                                                                  Chatterjee, Deb K.
Solus, Joseph
Yang, Shuwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     893 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SS: not relevant not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Floppy disk
06-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.5%;
28.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PC-DOS/MS-DOS
                                          Release #1.0, Version #1.30
             US/09/019,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US 60/037,393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US/09/019,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (To be assigned)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32,893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0942.4250002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 72.5;
Pred. No. 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ed. No. 6.8;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
```

j,

APPLICATION NUMBER: FILING DATE: 07-FE

CLASSIFICATION:

```
RESULT 14
US-09-019-160-9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-019-160-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No. 6306588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 9,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION: APPLICANT: Chatte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEFAX: 202-371-2540
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: US 60/037,393
                                                                                                                                                                                                                    COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                 SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Polymerases for Analyzing or Tyl
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION: TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      628 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   569 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFH 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                         APPLICATION NUMBER: (To be assigned) FILING DATE: 06-JAN-1998
                                                                                                                        APPLICATION NUMBER: FILING DATE: 06-FE
                                                                                                                                                                                     COMPUTER: IBM PC OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                         ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & STREET: 1100 New York Ave., N.W., Suite CITY: Washington
                                                                                                                                                                                                                                                     COUNTRY: USA
ZIP: 20005-3934
                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64 ----AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                                                                                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24 TDTGEMSLQLPVLEENA------LRALEELERTALLQTLRQTVGTE------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
nes 28; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
TOPOLOGY: no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 0
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER: 32
REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Esmond, Robert
                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09019160
                                                                                                                                                                                                                                                                                                                                                                                                         Solus, Josepr
Yang, Shuwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  893 amino acids
                                                                                                                                                                                   IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                               Chatterjee, Deb K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SS: not relevant not relevant
                                                                                                                                                                                                                                                                                                              STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C OO New York Ave., N.W., Suite 600
                                                                                                                                                                                                                  Floppy disk
                                                                                                                          06-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER: US 60/037,393
07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             06-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                Joseph
                                                                                                                                                                                                                                                                                                                                                                         Polymerases for Analyzing or Typing Polymorphic Nucleic Acid Fragments and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11.5%;
28.9%;
                                                                                                                                     US/09/019,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (To be assigned)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               32,893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 72.5; D
Pred. No. 6.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0942.4250002
                                                                                                                                                                     Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 5
```

US-09-019-160-2 RESULT 10

Sequence 2, Application US/09019160 Patent No. 6306588

GENERAL INFORMATION

APPLICANT:

APPLICANT:

Chatterjee,

Joseph

```
8
                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                               Оy
                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                       US-09-019-160-2
                                                                                                         US-09-019-160-6
                                                                                                                         RESULT 11
                                                  sequence 6, Application US/09019160 Patent No. 6306588 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEPHONE: 202-371-2600
TELEFAX: 202-371-2540
INFORMATION FOR SEQ ID NO: 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/019,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: Polymerases for Analyzing or Typing Polymorphic TITLE OF INVENTION: Nucleic Acid Fragments and Uses Thereof
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELECOMMUNICATION INFORMATION: TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE:
                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: LIVE CITY: Washington
                                                                                                                                                                                                                                               569 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFH 627
                                                                                                                                                                           628 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 664
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: amino acid
STRANDEDNESS: not
TOPOLOGY: not rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 06-JAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C
STREET: 1100 New York Ave., N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                     Locai Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Esmond, Robert W
REGISTRATION NUMBER: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 6 FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                               64 ---- AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20005-3934
                                                                                                                                                                                                                                                                                                                       28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               893 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Solus, Josep
Yang, Shuwei
                                                                                                                                                                                                                                                                                                                     Conservative
                                 Chatterjee, Deb K.
Solus, Josep
Yang, Shuwei
                                                                                                                                                                                                                                                                                                                                                                                                                           ss: not relevant not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                06-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    06-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                       11.5%; Score 72.5; DI 28.9%; Pred. No. 6.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 60/037,393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (To be assigned)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      32,893
                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0942.4250002
                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                         DB 4; Length 893;
                                                                                                                                                                                                                                                                                                                          25;
                                                                                                                                                                                                                                                                                                                            29;
                                                                                                                                                                                                                                                                                                                          Gaps
```

<u>ن</u>

```
밁
                                                                                                                                                                                                                                                                                                                                                               ş
                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-019-160-6
                                                                                                                                                                                                                                                             RESULT 12
US-09-019-160-7
                                                                                                                                                                                                                        Sequence 7, Application US/09019160 Patent No. 6306588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 202-371-2540 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: STERNE, K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: Esmond, Robert W.
REGISTRATION NUMBER: 32,893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 6
FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 893 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: no
MOLECULE TYPE:
                                                                                                    TITLE OF INVENTION: Polymerases for Analyzing or Typing Polymorphic TITLE OF INVENTION: Nucleic Acid Fragments and Uses Thereof NUMBER OF SEQUENCES: 93
                                                                                                                                                                     APPLICANT:
                                                                                CORRESPONDENCE ADDRESS:
                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                               628 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 664
                                                                                                                                                                                                                                                                                                                                                                                                569 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFII 627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 06-JACLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CITY: Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY:
                                                                                                                                                                                                                                                                                                                                                               64 ----AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
COUNTRY:
                 STATE:
                                    CITY:
                                                  STREET:
                                                                  ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                               Washington
                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C 1100 New York Ave., N.W., Suite 600
                                                 E: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C 1100 New York Ave., N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                     Solus, Josep
Yang, Shuwei
 USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         not relevant
                                                                                                                                                                                        Chatterjee, Deb K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UMBER: (To be assigned)
06-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            06-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Polymerases for Analyzing or Typing Polymorphic
Nucleic Acid Fragments and Uses Thereof
                                                                                                                                                                          Joseph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 60/037,393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/09/019,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0942.4250002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 72.5; D
Pred. No. 6.8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 893;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                            63
```

Ģ

```
; TOPOLOGY: no; MOLECULE TYPE: US-09-019-160-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
Query Match
Best Local Similarity 28.5
Thes 28; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-019-160-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; TOPOLOGY: not releva; MQLECULE TYPE: protein US-09-019-160-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sequence 3, Application US/09019160 Patent No. 6306588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
                                                                                                                                                                                        INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                         SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: Patentin Rel CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Polymerases for Analyzing or Typing Polymorphic TITLE OF INVENTION: Nucleic Acid Fragments and Uses Thereof NUMBER OF SEQUENCES: 93
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Chatterjee,
APPLICANT: Solus, Josep
APPLICANT: Yang, Shuwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STREET: 1100
                                                                                                                             STRANDEDNESS:
                                                                                                                                                                                        TELEPHONE: 202-371-2540
                                                                                                                                                                                                                                                 NAME: Esmond, Robert W. REGISTRATION NUMBER: 32, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 6 FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 345 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         286 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFH 344
                                                                                                                                                            LENGTH:
                                                                                                                                                                                                                                                                                                                                                                             CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 06-JA
                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 06-FEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64 ----AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24 TDTGEMSLQLPVLEENA------LRALEELERTALLQTLRQTVGTE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Match 11.5%;
Local Similarity 28.9%;
                                                                                                                                           amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20005-3934
                                                                                                                                                        677 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   E: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C
1100 New York Ave., N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                                                               not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chatterjee, Deb K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        not relevant
                                                                                               protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                           06-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                      06-FEB-1998
                                                                                                                           not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       not relevant
                                  11.5%; Score 72.5; 28.9%; Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Joseph
                                                                                                                                                                                                                                                                                                                                          US 60/037,393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US/09/019,160
                                                                                                                                                                                                                                                                 32,893
                                                                                                                                                                                                                                                                                                                                                                                                      (To be assigned)
                  15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 72.5;
Pred. No. 4;
                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version #1.30
                                             DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
                  25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          25;
                                             Length 677;
               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 610;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
               29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          29;
            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63
              Ų.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٥
۲
```

DP DP

443 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 479

64 ----AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92

```
; TOPOLOGY: no;; MOLECULE TYPE: US-09-019-160-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-019-160-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        QΥ
                                                                         Matches
                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION: APPLICANT: Chatte
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ZIP: ZUVUJ -- COMDUTER READABLE FORM:
VENTUM TYPE: Floppy disk
                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION DATA:
384 TKTGEYSTRIEVLEETANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFH 442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                               24 TDTGEMSLQLPVLEENA------LRALEELERTALLQTLRQTVGTE-----
                                                                                                                                                                               STRANDEDNESS:
                                                                                                                                                                                                                                                         TELEPHONE: 202-371-2600
TELEFAX: 202-371-2540
                                                                                                                                                                                                                                                                                                      NAME: Esmond, Robert W. REGISTRATION NUMBER: 32, REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             353 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFH 41I
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: (TO FILING DATE: 06-JAN-1998
                                                                                       Local
                                                                                                                                                                                                               LENGTH:
                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 6 FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS SOFTWARE: PatentIn Release #1.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64 ----AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKAIVPQD 448
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TDTGEMSLQLPVLEENA------LRALEELERTALLQTLRQTVGTE------
                                                                                   Similarity
                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        bc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09019160
                                                                                                                                                                                                            708 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C 1100 New York Ave., N.W., Suite 600
                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                               not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Solus, Josep
Yang, Shuwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chatterjee,
                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               06-FEB-1998
                                                                                                                                                                               not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Joseph
                                                                                    1I.5%;
28.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Polymerases for Analyzing or Typing Polymorphic Nucleic Acid Fragments and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                    US 60/037,393
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Release #1.0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/09/019,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (To be assigned)
                                                                                                                                                                                                                                                                                                                      32,893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Deb K.
                                                                 15;
                                                                              Score 72.5; DB
                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Version #1.30
                                                                                                 DB
                                                                   25;
                                                                                              Length 708;
                                                                 Indels
                                                                 29;
                                                            Gaps
                                 63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63
                                                              Ç.
```

D

```
US-09-006-535-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us-09-019-160-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Mus musculus US-09-006-535-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Julle Yan Pan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 4, Application US/09006535 Patent No. 5965396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 11.6%;
Best Local Similarity 31.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/09019160 Patent No. 6306588
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: David Shay Silbersteln TITLE OF INVENTION: HUMAN LYMPH NO FILE REFERENCE: PHM.70295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/006,535 CURRENT FILING DATE: 1998-01-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT: Mark Egerton
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: (To
FILING DATE: 06-JAN-1998
                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/019,160 FILING DATE: 06-FEB-1998
                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
ODERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES: 93
CORRESPONDENCE ADDRESS: STREET: 1100 New York Ave., N.W., Suite 600
STREET: 1100 New York Ave., N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: Polymerases for Analyzing or Typing Polymorphic TITLE OF INVENTION: Nucleic Acid Fragments and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 60/037,393
FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            283 ALKARSKSC 291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          109 KQHGTAPEC 117
ATTORNEY/AGENT INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                55 TLRQTVGTEAEGSLGQA-----DPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQR 108
                                                                                                                                                                                                                                                                                                                                                                               STATE:
                                                                                                                                                                                                                                                                                                                                                                                                 CITY: Washington
                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                   CLASSIFICATION:
                                                                                           CLASSIFICATION:
                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      297
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                           20005-3934
                                                                                                                                                                                                                                                                                                                                                                               g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Solus, Joseph
Yang, Shuwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Chatterjee, Deb K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HUMAN LYMPH NODE DERIVED GTPase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Joseph
                                                                                                                                   (To be assigned)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 73.5; DI 
Pred. No. 1.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          26; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 297;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2
```

```
Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-019-160-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   us-09-019-160-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 10, Application US/09019160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 610 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION: TELEPHONE: 202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY: not relevant MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                              COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: Polymerases for Analyzing or Typing Polymorphic TITLE OF INVENTION: Nucleic Acid Fragments and Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Solus, Joseph APPLICANT: Yang, Shuwei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                 TELECOMMUNICATION INFORMATION:
                                                                                                                                          ATTORNEY/AGENT INFORMATION: NAME: Esmond, Robert W.
                                                                                                                                                                                                                                    CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         345 QTGTATGRLSSSDPNLQNLPTKSEEGKEIRKATVPQD 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               286 TKTGEYSTRIEVLEEIANEHEIVPLILEYRKIQKLKST-YIDTLPKLVNPKTGRIHASFH 344
              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: amino acid
STRANDEDNESS: not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         64 ----AEGSLGQADPSAE---TPTPRG-SLRKALTGQD 92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24 TDTGEMSLQLPVLEENA------LRALEELERTALLQTLRQTVGTE------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
                                    TELEPHONE: 202-371-2540
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/0 FILING DATE: 06-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STATE:
                                                                                                       REGISTRATION NUMBER: 32,893 REFERENCE/DOCKET NUMBER: 09
                                                                                                                                                                               CLASSIFICATION:
                                                                                                                                                                                                 APPLICATION NUMBER: US 6 FILING DATE: 07-FEB-1997
                                                                                                                                                                                                                                                                       APPLICATION NUMBER: (To be assigned) FILING DATE: 06-JAN-1998
                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20005-3934
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Washington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Esmond, Robert W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: STERNE, KESSLER, GOLDSTEIN & FOX, P.L.L.C 1100 New York Ave., N.W., Suite 600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           202-371-2540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
610 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chatterjee, Deb K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             USA
                                                                      202-371-2600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        93
                                                                                                                                                                                                                   US 60/037,393
                                                                                                                                                                                                                                                                                                                                                                 US/09/019,160
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32,893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0942.4250002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 72.5;
Pred. No. 4;
                                                                                                            0942.4250002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches : 25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 610;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            63
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Б
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q
                                                                                                                                                                                                                                                                                                                                                       US-09-027-381-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-477-071-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        γg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-477-071-2
                                                                                                                                                                                                                                                                                                                     Sequence 4, Application US/09027381 Patent No. 6075137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity Matches 47; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 2, Application US/09477071 Patent No. 6348585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILE REFERENCE: GP-70366-D2
CURRENT APPLICATION NUMBER: US/09/477,071
CURRENT FILING DATE: 2000-01-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT FILING DATE: 2000-01-03
EARLIER APPLICATION NUMBER: 09/027,381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: MCNULTY, DEAN
APPLICANT: ELLIS, CATHERINE
TITLE OF INVENTION: HUMAN UROTENSIN II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EARLIER APPLICATION NUMBER: 60/073,616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EARLIER APPLICATION NUMBER: 60/072,383
EARLIER FILING DATE: 1998-01-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EARLIER FILING DATE: 1998-02-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: CULP, JEFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: HOMO SAPIENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH:
                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                     NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                   103 QDFSGQDPNILLSHLLARIWKPYKKRET-PDCFWKYCV 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        103
                                  OPERATING SYSTEM:
                                                     COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                  87 -ALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   43 EISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKF 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  28 EMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTPRGSLRK- 86
                                                                   MEDIUM TYPE:
                                                                                                                   COUNTRY:
                                                                                                                                                                      STREET:
                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  87 -ALTGODSNTVLSRLLARTRKORKOHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QDFSGQDPNILLSHLLARIWKPYKKRET-PDCFWKYCV 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMSLOLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTPRGSLRK- 86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKF 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             139
                                                                                                     19482
FING SYSTEM: DOS

ARE: FastSEQ for Windows Version 2.0

APPLICATION DATA:
                                                                                                                                                   VALLEY FORGE
                                                                                                                                      PΑ
                                                                                                                                                                      P.0.
                                                                                                                                                                                                                                                  MCNULTY, DEAN ELLIS, CATHERINE
                                                                                                                   USA
                                                                                                                                                                                                                                                                                    CULP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                              IBM Compatible
                                                                                                                                                                                    RATNER & PRESTIA
                                                                    Diskette
                                                                                                                                                                     BOX 980
                                                                                                                                                                                                                                                                                    JEFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31.4%;
48.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 198.5;
Pred. No. 5e
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

```
Ъ
                                                                                                                                                                                                                                                                                     US-09-477-071-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-477-071-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-027-381-4
                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                             SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 4
                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Applic Patent No. 6348585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT APPLICATION NUMBER: US/09/477,071
CURRENT FILING DATE: 2000-01-03
EARLIER APPLICATION NUMBER: 09/027,381
EARLIER FILING DATE: 1998-02-20
EARLIER APPLICATION NUMBER: 60/072,383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EARLIER FILING DATE: 1998-01-09
EARLIER APPLICATION NUMBER: 60/073,616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: HUMAN UROTENSIN II FILE REFERENCE: GP-70366-D2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: MCNULTY, DEAN APPLICANT: ELLIS, CATHERINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: CULP,
                                                                                                                                                                                                                                                                                                             ORGANISM: HOMO SAPIENS
                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION: TELEPHONE: 610-407-0700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                          15 LNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPS 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  54 TNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCFWKYCV 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               75 AETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15 LNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPS 74 :||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|| ||:|
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEPHONE: 610-407-0701
2 MNPILSICFYSVAP-----HEDARLTPEELERASLLQILPEMLGAERGDILRKADSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
TOPOLOGY: lir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: GP-70366-1P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 MNPILSICFYSVAP-----HEDARLTPEELERASLLQILPEMLGAERGDILRKADSS 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                   47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino aci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09477071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRESTIA, PAUL F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DATE:
                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                103 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       JEFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         09-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               single
                                                                                                                                                                 29.6%; Score 187.5; DB 4 42.3%; Pred. No. 6.7e-15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29.6%; Score 187.5; DB 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/09/027,381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/072,383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        23,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
                                                                                                                                            13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GP-70366
                                                                                                                                     Mismatches
                                                                                                                                                                                                   DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 3;
                                                                                                                                         40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          40;
                                                                                                                                                                                               Length 103;
                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11,
                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                  ω
••
```

δÃ

75

AETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYCI 123

```
Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence:
       pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB
DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
       1198.5
11898.5
1897.5
1897.5
173.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
172.5
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Issued_Patents_AA:*

1: /cgn2_6/ptodata/2,

2: /cgn2_6/ptodata/2,

3: /cgn2_6/ptodata/2,

4: /cgn2_6/ptodata/2,

5: /cgn2_6/ptodata/2,

6: /cgn2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-831-907A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March 10, 2003, 17:37:08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query
Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               262574 seqs, 29422922 residues
       MDRVPFCCLLFVGLLNPLLS.....TRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GenCore version 5.1.3 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /cgn2_6/ptodata/2/1aa/5A_COMB.pep:*
/cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6A_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/backfiles1.pep:*
       DВ
3 US-09-027-381-2

US-09-477-071-2

US-09-477-071-4

US-09-019-160-10

US-09-019-160-10

US-09-019-160-3

US-09-019-160-5

US-09-019-160-6

US-09-019-160-6

US-09-019-160-7

US-09-019-160-9

US-08-484-661A-39

US-08-484-661A-39

US-08-484-661A-39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Search time 11.3027 Seconds (without alignments) 320.191 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               262574
     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Description
                                                                                                                 2 Appli
4 Appli
4 Appli
4 Appli
4 Appli
6 Appli
7 Appli
8 Appli
   22, Appl
2, Appli
39, Appl
39, Appl
39, Appl
37, Appl
```

RESULT 1 US-09-027-381-2 US-09-027-381-2 US-09-027-381-2 US-09-027-381-2 Sequence 2, Application US/ Patent No. 6075137 GENERAL INFORMATION: APPLICANT: CULP, JEFFER APPLICANT: ELLIS, CATHE TITLE OF INVENTION: HUM INTERESSONDENCE ADDRESS: ADDRESSEE: RATHER 6; STATE: P.O. BOX 980 CITY: VALLEY FORGE STATE: P.O. BOX 980 CITY: VALLEY FORGE STATE: P.O. BOX 980 COMPUTER READABLE FORM: MEDIUM TYPE: Diskette COMPUTER: IBM Compati OPERATING SYSTEM: DOS SOSTWARE: FASTSED for CURRENT APPLICATION NUMBER: FILING DATE: QO-FEB FILING DATE: QO-JAN-I APPLICATION NUMBER: PRIOR APPLICATION NUMBER: FILING DATE: O9-JAN-I APPLICATION OP-JAN-I APPLICA	28 66.5 10.5 30 66.5 10.5 31 66.5 10.5 32 66.5 10.5 33 66.5 10.5 34 66.5 10.5 36 66.5 10.5 36 66.5 10.5 37 66.5 10.5 38 66.5 10.5 41 66.5 10.5 42 66.5 10.5 43 66.5 10.5 44 66.5 10.5 45 66.5 10.5 47 66.5 10.5 48 66.5 10.5 49 66.5 10.5 40 66.5 10.5 40 66.5 10.5
LITY DEAN S; CATHERINE ON: HUMAN UROTENSIN II CES: 5 DDRESS: TNER & PRESTIA BOX 980 FORGE E FORM: DISKette (Compatible EM: DOS FORGE ION DATA: MBER: 05/072,381 MBER: 60/072,381 20-FEB-1998 : TOP TON DATA: MBER: GP-70366-1P 04-FEB-1998 O4-FEB-1998 O5-DINGER: GP-70366 O5-DINGER: GP	571 3 US-08-656-664-37 571 5 PCT-US96-09641-37 578 3 US-08-484-661A-11 578 3 US-08-656-664-11 578 5 PCT-US96-09641-11 610 3 US-08-484-661A-16 610 3 US-08-484-661A-19 610 3 US-08-484-661A-29 610 3 US-08-484-661A-29 610 3 US-08-484-661A-29 610 3 US-08-484-661A-35 610 3 US-08-484-661A-35 610 3 US-08-656-664-16 610 3 US-08-656-664-16 610 3 US-08-656-664-23 610 3 US-08-656-664-23 610 3 US-08-656-664-26
	Sequence 37, Appl Sequence 11, Appl Sequence 11, Appl Sequence 11, Appl Sequence 11, Appl Sequence 16, Appl Sequence 16, Appl Sequence 19, Appl Sequence 20, Appl Sequence 21, Appl Sequence 23, Appl Sequence 33, Appl Sequence 33, Appl Sequence 34, Appl Sequence 37, Appl Sequence 37, Appl Sequence 38, Appl Sequence 38, Appl Sequence 16, Appl Sequence 17, Appl Sequence 18, Appl Sequence 26, Appl Sequence 27, Appl Sequence 28, Appl Sequence 26, Appl

Query Match Best Local Similarity

31.4%; 48.0%;

Score 198.5; DB Pred. No. 5e-16;

ů.

Length 139;

```
RESULT 15
AAB65230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           QV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                             Grimaldi CJ,
Roy MA, Stewa
                                                              Ferrara N,
                                                                      Ashkenazi AJ,
                                                                                                                               24-FEB-2000;
24-FEB-2000;
                                                                                    (GETH ) GENENTECH INC.
                                                                                                                      02-MAR-2000;
                                                                                                       20-MAR-2000;
                                                                                                                                               22-FEB-2000;
                                                                                                               L5-MAR-2000
                                                                                                                                                       18-FEB-2000;
                                                                                                                                                                11-FEB-2000;
                                                                                                                                                                                                                                                                                                             30-MAR-2000; 2000WO-US08439
                                                                                                                                                                                         20-DEC-1999,
                                                                                                                                                                                                                                                                26-JUL-1999;
                                                                                                                                                                                                                                                                                                                                07-DEC-2000
                                                                                                                                                                                                                                                                                                                                               WO200073454-A1
                                                                                                                                                                                                                                                                                                                                                                              Human; secreted and cell death; cancer; diagnostic assay.
                                                                                                                                                                                               16-DEC-1999
                                                                                                                                                                                                                 30-NOV-1999
                                                                                                                                                                                                                                                                         20-JUL-1999;
                                                                                                                                                                                                                                                                                07-JUL-1999,
                                                                                                                                                                                                                                                                                                                                                                                                            Human PRO1068 (UNQ525) protein sequence
                                                                                                                                                                                                                                                                                        23-JUN-1999
                                                                                                                                                                                                                                                                                                                                                                Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAB65230 standard; Protein; 124 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                 02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB65230;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120 WKYCV 124
            2001-032160/04.
DB; AAF44193.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAERGDILRKADSSTNIFNERGNLRKFQDFSGQDPNILLSHLLARIWKFYKKRET-PDCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WKYCI 123
                                            Stewart TA,
                                                   Fong S,
                                                                                                                                    2000WO-US00219
2000WO-US00376
2000WO-US03565
2000WQ-US04341
2000WO-US04414
2000WO-US04914
                                                                                                    2000WO-US06884.
2000WO-US07377.
                                                                                                                      2000WO-US05841
                                                                                                                             2000WO-US05004.
                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                    Baker
                                                                                                                                                                                                      99WQ-US28313
99WO-US28301
                                                                                                                                                                                      99WO-US30911
                                                                                                                                                                                                                             99WO-US21090
99WO-US21547
                                                                                                                                                                                                                       99US-0158663
                                                                                                                                                                                                                                             9908-0149396
                                                                                                                                                                                                                                                       99US-0146222
                                                                                                                                                                                                                                                                              9908-0143048
                                                                                                                                                                                                                                                                                        99US-0141037
                                                                                                                                                                                                                                                                                               99WO-US12252
                                                                                                                                                                                              9WO-US30095
                                       r KP, Botstein D, Des
Gerber H, Gerritsen
By AL, Kljavin IJ, Nap
A, Tumas D, Watanabe C
                                                                                                                                                                                                                                                              0145698
                                                                                                                                                                                                                                                                                                                                                                               transmembrane protein; pRO; cytostatic;
chromosomal mapping; gene mapping; tissue typing;
                                     tein D, Desnoyers L, Eaton
Gerritsen ME, Goddard A,
vin IJ, Napier MA, Pan J,
Watanabe CK, Williams PM,
                                                                                                                                                                                                                                                                                                                                                                                                            SEQ ID NO:266
                                       Paoni
Wood
                                                              DL;
                                                    Godowski PJ;
                                      WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
```

Search completed: March 10, 2003, 17:38:44
Job time: 29.9189 secs

<u>.</u>

PRQ polynucleotides used to produce polypeptides used to target

```
В
                                        Q
                                                                                  DЬ
                                                                                                                    Qy
                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                             CC The present invention describes human secreted and transmembrane PRO CC proteins. The PRO proteins have cytostatic activity. The PRO proteins CC can be used for targeted delivery of bioactive molecules, such as CC sequences, and their fragments, can be used as hybridisation probes, in CC can board and gene mapping, and in the generation of anti-sense RNA CC cand DNA. They may also be used to produce transgenic animals which are CC nucleotide and protein sequence can be used for tissue typing and in the used to develop and screen therapeutically useful reagents. The PRO CC treating cancer. Anti-PRO antibodies can be used in diagnostic assays. CC in the isolation of human PRO sequences. AAF44087 to AAF44269 and CC CAAB65194 to AAB65300 represent PCR primers and hybridisation probes used CC CAAB65194 to AAB65300 represent human PRO polynucleotide and protein cCC caaba65194 to AAB65300 represent human PRO polynucleotide and protein case control to the process of the present human PRO polynucleotide and protein case can be used in diagnostic assays.
                                                                                                                                                                                                                                   Query Match
Best Local Similarity
Matches 62; Conserv
                                                                                                                                                                                                                                                                                                                   Sequence
120 WKYCV 124
                                      119 WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 12; Fig 184; 935pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           bioactive molecules such as toxins, radiolabels or antibodies, specific cells, to cause targeted cell death -
                                                        61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF
                                                                                    61 GTEAEGSLGQADPSAETPTPRGSLRK--ALTGODSNTVLSRLLARTRKORKQHGTAPECF 118
                                                                                                                                    MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                               124 AA;
                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                 44.28;
                                                                                                                                                                                                                                 16;
                                                                                                                                                                                                                         Score 279.5; DB Pred. No. 6e-23; 6; Mismatches
                                                                                                                                                                                                                                                                 DB 22;
                                                                                                                                                                                                                           44;
                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                             Length 124;
                                                                                                                                                                                                                     ω
••
                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç
                                                                                                                                        60
```

?

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                             밁
Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baker K,
Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequences have homology with proteins including LDL receptors, TIE religions and various enzymes. The membrane-bound proteins and receptor molecules are useful as pharmaceutical and diagnostic agents. Receptor immunoadhesins, for instance, can be used as therapeutic agents to block immunoadhesins, theractions. The membrane-bound proteins can also be employed for screening of petential peptide or small molecule inhibitors of the relevant receptor/ligand interaction. The PRO encoding sequences are useful as hybridization probes, in chromosome and gene mapping and in the generation of antisense RNA and DNA. PRO nucleic acid sequences will also be useful for the preparation of PRO polypeptides, especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The invention provides membrane-bound PRO polypeptides and polynucleotides encoding them. The PRO sequences of the invention were identified based on extracellular domain homology_screening. The PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ciaim 12; Fig 184; 822pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Membrane-bound proteins and related nucleotide sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-PSDB; AAZ65047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         by recombinant techniques.
                                                                                                                                                             antirheumatic; antiarthritic; antiinflammatory; antianaemic;
immunosuppressive; antithyroid; antidiabetic; neuroprotective;
hepatotropic; virucide; dermatological; antipsoriatic;
                                                                                                                                                                                                                                                                                                            AAB20118 standard; Protein; 124
                                                                                                                                                  antiasthmatic;
                                                                                                                                                                                                   PRO1068; UNQ525; human; immune disease; autoimmune disease;
                                                                                                                                                                                                                               Human immunostimulant PRO1068
                                                                                                                                                                                                                                                          30-APR-2001
                                                                                                                       Homo saplens
                                                                                                                                                                                                                                                                                                                                                                                                         119
                                                      protein
                            Modified-site
                                                                                Peptide
                                                                                                                                                                                                                                                                                                                                                                                120 WKYCV
  Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-072883/06
                                                                                                                                                                                                                                                                                                                                                                                                                                GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                         WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chen J,
Yuan J;
                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                  antiallergic;
     /note=
92..98
                              61..67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard A,
                                                                                             Location/Qualifiers
                                          /label- Mature_protein
                                                                    /label•
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             44.2%;
               "N-myristoylation site"
                                                                    Signal_peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 279.5; DB 
Pred. No. 6e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney AL,
                                                                                                                                                     immunostimulant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 21; Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Watanabe CK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N
```

Query Match Best Local Similarity Matches 62; Conserv

Conservative

16;

44.2%;

Score 279.5; DB Pred. No. 6e-23; Mismatches

DB

Indels Length 124;

ω --

Gaps

2

Sequence

124 AA;

```
cc thrombocytopaenia, thyroiditis, dibetes mellitus, immune-mediated crenal disease, demyelinated diseases (such as multiple sclerosis), cc autoimmune chronic active hepatitis, primary biliary cirrhosis, cc autoimmune chronic active hepatitis, primary biliary cirrhosis, cc autoimmune chronic active hepatitis, primary biliary cirrhosis, cc enteropathy, whipple's disease, (auto)immune-mediated skin diseases cuch as bullous skin disease, (auto)immune-mediated skin diseases cuch as bullous skin disease, erythema multiforme and psoriasis), cc (such as bullous skin disease, erythema multiforme and psoriasis), cc diseases (such as asthma, allergic rhinitis, atopic cdiseases of the lung and transplantation associated diseases (such as graft rejection and graft-versus-host disease) (all claimed). cc as graft rejection and graft-versus-host disease) (all claimed). cc claimed methods of diagnosing these disorders comprise detecting of the level of expression of the PRO gene. Also claimed are a method continuity of the PRO polypeptide, vectors, host cells, antibodies, and a method of stimulating the proliferation of T lymphocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15-MAR-2000; 2000WO-US06884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        response, or increasing the proliferation of T-lymphocytes in a mammal in response, or increasing the proliferation of T-lymphocytes in a mammal in response to an antigen. Claimed compositions comprising a propertide or its antagonist have the opposite effect. A a propertide or its antagonist have the opposite effect. A claimed method for treating an immune related disorder, such as a T cell disorder, involves administering a propertide, an agonist cell disorder, involves administering a propertide, an agonist antibody or an antagonist antibody. The disorder is selected from antibody or an antagonist antibody. The disorder is selected from antibody or an antagonist antibody. The disorder is selected from antibody or an antagonist antibody. The disorder is selected from antibody or an antagonist antibody. Systemic selected from antibody or an antagonist antibody. Systemic selected from antibody or an antagonist antibody. Systemic selected from architis, spondyloarthropathy, systemic selected from the property of the systemic selected from the systemic selected from antibody. Systemic selected from the systemic s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.14. The invention provides polynucleotides (see AAF30050-62) encoding novel human PRO proteins (see AAB20108-20) including pRO1068. Claimed compositions comprising these proteins or their agonists are useful for increasing infiltration of infilammatory agonists are useful for increasing infiltration of infilammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Claim 20; Fig 22; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New PRO polypeptides, nucleic acids and (ant)agonists, useful for diagnosing and treating immune-related disorders, such as multiple sclerosis, rheumatoid arthritis and diabetes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20-JUL-1999:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200105972-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hillan KJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WP1; 2001-103149/11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ashkenazi AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UNQ525), as deduced from cDNA (see AAF30060) isolated from database screening. PRO1068 has a mol.wt. of 14 kDa and a result of 14 kDa an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence is that of novel human immunomodulator PRO1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mark MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Baker KP,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99US-0144758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "N-myristoylation site"
112..116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=
64..67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KP, Fong S,
Marsters SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "cell attachment sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "camp- and cGMP-dependent protein kinase phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "urotensin II signature"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Goddard A,
pitti RM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tumas D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Godowski PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe CK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney AL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           of.
```

PR	PR	PR R	PR	י קל	PR	PR	בי ט ג	PR	PR	PR	PR	י ק	קר ביו גר	PR	PR	PR	PR	PR	PR	PR ?	D ?	ָ קל	ט ד ג	י ס ל ס	ָל מ	D ;	ָר ק	ָ מַלָּק	ָר ק כ ס	ָּבְיבָ ג נ	ק ק	ָּבְי ג נ	ָּבְי ג נ	PR	₽ ;	ָ ק	י ס כ	ָּבְי ג	PR	PR	PR	PR	PR	יי סיי	י ג ס	PR	XX	ΡF	×	PD	×	D X	SO	××	Z								
24-JUN-1998;	24-JUN-1998; 24-JUN-1998;	24-JUN-1998;	24-JUN-1998;	24 - JUN-1998;	24-JUN-1998;	23-JUN-1998;	22-JUN-1998;	22-JUN-1998;	22-JUN-1998;	19-JUN-1998;	JUN-1	19-JUN-1990;	-JUN-1	٠.'	17-JUN-1998;	17-JUN-1998;	17-JUN-1998;	17-JUN-1998;	99		16-JUN-1998	16-JUN-1998:	9	9	12-JUN 1990;	11 - TIIN-1998.	11 - TIIN - 1998 .	11 - THN-1998.	9	7	199	9	10-JUN-1998;	199	661	199	99	-JUN-1	_'	10-JUN-1998;	: 8661-NDC-60	05-JUN-1998;		л ('	JUN-199	04-JUN-1998;	04-JUN-1998;	04-JUN-1998;	04-JUN-1998;	04-JUN-1998;		02 JUN-1998.	02-JUN-1998;	02-JUN-1998;	•	02-JUN-1999;		09-DEC-1999.	MO330000 Ak.	C4 - 88029000M	Homo sapiens.		pharmaceutical:
98US-0090538.	98US-0090472. 98US-0090535.	98US-0090445.	98US-0090444.	98US-0090431.	98US-0090429.	98US-0090355.	9808-0090254.	98US-0090252.	98US-0090246.	98US-0089952.	98US-0089948	9805-0089908.	98US-0089907.	98US-0089801.	98US-0089653.	98US-0089600.	9805-0089599.	9805-0089598.	98US-0089538	9805-0089532	9805-0089514	9805-009440.	9805-0089105.	0905-0090105	9005-0000076.	98116-0088876	9005-0000001.	09175-0000050	0005-0008826.	9805-008825.	9805-0088824.	1188800-SU86	9805-008810.	98US-0088742.	98US-0088741.	98US-0088740.	98US-0088738.	98US-0088734.	98US-0088730.	98US-0088722.	98US-0088655	98US-0088217	9805-0088212	0000-00000107.	9805-0088326.	9805-0088033.	98US-0088030.	98US-0088029.	9805-0088028.	98US-0088025.	98US-0088021	9005-0007733	008/6	98US-0087607.		99WO-US12252.							recentor
																										•																																					immunoadhesin: d
																																																							-							Acre mapping.	
																													•																	•																	
					•													. 1		•																																											
			-		٠.	-	-			ı		-				٠.	-				-			-						-								-			-												-		-		-				-	٠.	
		•																																																											•		-
PR	קרים קרים א	PR	PR PR	PR	PR	PR	PR	PR':	י קס	מי פ	PR	PR	PR	PR	PR	ָל קל	י ס כ	יי קס	ָרָרָלָרָ ק	PR	PR	PR	PR	PR	PR	PR	PR	PR .	PR	PR	PR	PR	PR	PR	PR	PR :	PR :	ָל ק	ָ קל	מ ק	י ס ל ס	י כ כ	7 7	PR	PR	PR	PR	PR :	מ מ	י ג ל	PR	PR	PR	PR	PR	PR	יי גע	א מ	PR	PR	PR	יי גע	1
	26-AUG-1998; 31-AUG-1998;		26-AUG-1998;		26-AUG-1998;		AUG-	AUG-	24-AUG-1998;	AUG-	AUG-1998	AUG-1998	AUG-1998	AUG-		בי מווים		17-AUG-1998;	AUG-		- 1								10-AUG-1998;		AUG-	AUG-		AUG-				30-JIII1998.	= 6	0-JIII	07 JUL-1998;	.07 - TIII - 1996;	02-JUL-1998;	02-JUL-1998;	02-JUL-1998;	2-JUL-	2-JUL-	2TIII	02 UUL 1990,	TOOL	-JUL-	01-JUL-1998;		26-JUN-1998;	25-JUN-1998;		25 - JUN - 1998;				25-JUN-1998;	24 - JUN- 1998;	
9908-01	98US-00	98US-00	0-SII86 0-SA	98US-0	98US-0	98US-0	98US-0	0-S086	- S1186	-S086	98US-0	98US-	98US-(98US-(-51186	0.5005	2086	5086	0-5086	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	98US-0	0-SU86	98US-0	0-5086	98118-0	9805-0	0-2006	98118-0	0-21180	2008-0	9805-0	98US-(98US-()-Sn86)-Sn86	0-21186	0-2006	0-2086	0-SU86	98US-0	98US-C	98US-(-Sn86	-51186	-2086	-5086	98US-	-Sn86	98US-(-SU86)
15565	S-0098014. S-0098525.	097986	09797£	097974	097971	097954	097952	1097951	177.600	0097141	097022	0096960	096959	096950	109694	000000	000000	1689601	096867	096791	096773	096768	096766	096757	096329	096146	096143	09601:	095929	095916	095325	095323	095318	095302	095301	095286	1095283	004651	09247.	002/7	101101	7.6T60	09167	009164	009163	091628	091626	001510	001404	09154	091360	09135	38060	380600	0090696	009069	009069.	0090691	0090681	009067	09067	009054	1

```
RESULT 12
AAY87319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   $\times C C C C C C C C C \times \tim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-plegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential
                                                                                                                                                                                                                                                                                                                                                                         antiasthmatic; gene therapy; cell proliferation; neurological disorder; reproductive disorder; developmental disorder; arteriosclerosis; cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Human; signal peptide-containing protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          New mammalian urotensin II polypeptide, useful neurodegeneration and spinal cord injury -
  26-JUN-1998;
31-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence represents a human prepro-urotensin II polypeptide. In mammals, urotensin II promotes survival and regeneration of motor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAA46698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (INRM ) 1NST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-NOV-1998;
                                                                                        25-JUN-1999;
                                                                                                                                                                                                        WO200000610-A2
                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                  Parkinson's disease; Huntington's diseases; ovulatory defect;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Human signal peptide containing protein HSPP-96 SEQ ID NO:96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY87319 standard; Protein; 124 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ||||:
WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MYKLASCCILFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000-400075/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ņ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Fig
                                                                                                                                                                                                                                                                                                                       dystrophy.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2; 42pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98FR-0014914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Coulouarn Y,
  98US-0090762
98US-0094983
                                                                                        99WO-US14484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 282.5;
Pred. No. 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lihrmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .8e-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaudry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ν,
```

RESULT 13 AAY66707

Ħ

AAY66707 standard; protein;

124 AA

밁 Š В

δÃ

61

61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF 119

GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 1.1.8

MYKLASCCLLFIGFLNPLLSLPLLDSRE1SFQLSAPHEDARLTPEELERASLLQ1LPEML

60

밁 Š

ب

XXX DXX XXX

05-APR-2000

(first entry)

Membrane-bound protein PRO1068

Membrane-bound polypeptide; PRO polypeptide; LDL receptor; TIE ligand;

```
CC (including cancer), inflammation, cardiovascular, neurological, CC reproductive or developmental disorders, (e.g. arteriosclerosis, CC cirrhosis, psoriasis, acquired immune deficiency syndrome, anaemia, Ccohn's disease, microbial or other infections, congestive or cschaemic heart disease, Alzheimer's, Parkinson's or Huntington's CC diseases, schizophrenia, ovulatory defects, muscular dystrophy). Hspp CC nucleic acids can be used for the recombinant production of Hspp, for detecting Hspp in standard hybridisation and amplification assays (for CC diagnosis and monitoring), in gene therapy, as antisense, triplex-forming or ribozyme therapeutics, for detecting related sequences or genetic variations, and for chromosomal mapping. Hspp are also used to CC antagonists (potential therapeutic agents), ab are used to diagnose, or monitor, Hspp-related diseases (in usual immunoassays), as therapeutic antagonists, in competitive drug screens, and for purification of Hspp
                                                    Matches
                                                                                Best Local
                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New human signal peptide-containing proteins useful in treatment, prevention and diagnosis of e.g. cancer, inflammation and cardiovascular disease \,\cdot\,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lal P, T
Akerblom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic, neuroprotective, cardiovascular and antiasthmatic activities, and can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-OCT-1998;
11-DEC-1998;
                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 1; Page 221-222; 327pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (1NCY-) 1NCYTE PHARM INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   human signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAZ98109 to AAZ98242
                                                                                                                                                                                                                     from natural sources
1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000-160673/14
DB; AAZ98204.
                                                       62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tang
                                                                                Similarity
                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        YT, Gorgo
Au-Young
                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide-containing proteins HSPP-1 to HSPP-134.
                                                                                                                                                                ₹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             98US-0102686.
98US-0112129.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gorgone
Young J,
                                                                                44.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               encode AAY87224 to AAY87357 which represent the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GA,
Yue
                                                    17;
                                                                                Pred. No. 2.8e-23;
                                                                                                            Score 282.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Corley NC, G
                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Guegler KJ,
on C, Reddy
                                                                                                            DB 21;
                                                       43;
                                                       Indels
                                                                                                         Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baughn MR;
R, Hillman
                                                    ω
--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HSPPs
                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      have
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             JĽ,
                                                    Ν
```

Urotensin peptides which are ligands for sensory epithelium neuropeptide-like receptor (SENR) for diagnosis and treatmen

treatment of

WPI; 2000-412287/35

```
SXCCCCCCCCCXXX PTTXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 10
AAU80120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention provides peptides which are ligands for sensory epithelium neuropeptide-like receptor (SENR), and their amides, esters and salts. SENR is a G-protein coupled receptor protein (also known as GPR14), and the peptides which are ligands for it are forms of the peptide hormone urotensin II. The peptides can be used in the treatment and diagnosis of hypertension and kidney disease, and the development of drugs which are regulators of central functions, circulatory functions, heart functions, immune system functions, digestive functions, metabolic functions and denital functions.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 36; Page 140-141; 147pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       functions and genital functions. The present sequence represents a bovine SENR ligand protein from the present invention.
                                                                                                                                                                                                                                                                                                                  SENR; Sensory epithelium neuropeptide-like receptor; cow; feattention deficit disorder; narcolepsy; anxiety; depression; schizophrenia; G protein-coupled; receptor.
                                                                                                                                                                                                                                                                                                                                                                              Cow sensory epithelium neuropeptide-like receptor (SENR) protein
                                                                                                                                                                                                                                                                                                                                                                                                          07-OCT-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU80120 standard; Protein; 122
                       POlypeptide GPR12 with ligand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these
                                                                                                                                                                                                                                                              WO200214513-A1
                                                                                                                                                                                                                                                                                          Bos taurus
                                                                                                                 Matsumoto Y,
                                                                                                                                                                                                     10-AUG-2001; 2001WO-JP06899
                                                                                                                                                                                                                                  21-FEB-2002
                                                                                                                                           (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                         10-AUG-2000; 2000JP-0247968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HYKLVSCCLLFIGSLNPLLSLPVLDSRQESLQL-LAPEDVRSTLDELERASLLQMLPEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YCV
|-|-:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                 Watanabe T,
                for anxiety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17; Mismatches
                                                                                                                  Takahashi H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 293.5; DB 2
Pred. No. 1.7e-24;
                                                                                                                    Mori M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 122;
                                                                                                                                                                                                                                                                                                                                                    fear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲;
                                                                                                                                                                                                                                                                                                                                        insomnia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
```

```
RESULT 11
AAY93639
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             멍
IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local S
Matches 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          schizophrenia or fear. The polypeptides of the invention, their precursor proteins and their encoding DNAs are useful in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, insomnia schizophrenia or fear. They are also useful for gene therapy. The polypeptide is a G protein-coupled receptor protein, with ligand activity to sensor epithelium neuropeptide-like receptor. The present sequence represents the cow sensory endothelium neuropeptide-like receptor protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               narcolepsy agent containing a polypeptide with a sequence identical or substantially similar to a fully defined 12 amino acid sequence given the specification, and its amide, ester or their Salt. The peptides have ligand activity to sensory epithelium neuropeptide like receptor (SENR) protein. The invention also includes a method for diagnosing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This invention relates to an anti-attention deficit disorder or anti-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 6; Page 276; 290pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   attention deficit disorder, narcolepsy, anxiety, depression,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY93639 standard; Protein;
                                                                                                                                                                                                                                                                                  spinal cord trauma; hemi-plegia; para-plegia;
amyotrophic lateral sclerosis; antihypertensive agent
                                                                                                                                                                                                                                                                                                 Urotensin II; motor spinal cord trauma;
                                                                                                                                                                                                                                                                                                                                                                                                     AAY93639
                                                                                                                                                                                                                                                                                                                                            Amino acid sequence
                                                                                                                                                                                                                                                                                                                                                                          25-SEP-2000
                                                         Peptide
                                                                                        Misc-difference
                                                                                                                   Misc-difference
                                                                                                                                                Misc-difference
                                                                                                                                                                             Peptide
                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                      Homo sapiens
               WO200031265-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60 GAETGEGLRNTDPITNIFYPRGNMRKAFSGODPKLFLSDLLSRIRKQSKKRGPSSECFWK 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ᆫ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MYKLVSCCLLFIGSLNPLLSLPVLDSRQESLQL-LAPEDVRSTLDELERASLLQMLPEMS 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                         (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
                                                                                        /note= "encoded by 81
                                                                                                                      47
                                                                                                                                                   46
                                                           114.
                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                 /note=
                                                                                                                                                                                            /note= "signal peptide"
                                                                                                                                   note= "encoded by GAC"
                                                                         'note= "encoded by ATT"
                                                                                                                                                                                                                                                                                                                                          Of a human prepro-urotensin II (UII) polypeptide.
                                                                                                                                                                                                                                                                                               neuron; hypertensive; neurodegeneration;
hemi-plegia; para-plegia;
                                                                                                                                                                                                                                                                                                                                                                          entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46.48;
                                                                                                                                                               "pro-segment of urotensin
                                             "urotensin II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 293.5; DB 23; Pred. No. 1.7e-24;
                                                                                                                                                                                                                                                                                                                                                                                                                                     AA
                                                                                                       GTA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              44;
                                                                                                                                                                  H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        insomnia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              insomnia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   in
```

1:

26-NOV-1999; 02-JUN-2000

99WO-FR02941

```
TO NOT THE FEW NOTES TO SERVICE T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local :
                                                                                                                                                                                                                                                                    Urotensin II; motor neuron; hypertensive; neurodegeneration; spinal cord trauma; hemi-plegia; para-plegia; para-plegia; amyotrophic lateral sclerosis; antihypertensive agent.
                                          WO200031265-A1
                                                                                                                                                                                                                                      Mus sp
                                                                                                                    Peptlde
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY93648;
                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                      Amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                        25-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY93648 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neurodegeneration and trauma of the spinal cord (e.g. hemi-plegla, para-plegla or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence represents a rat pro-unotensin II polypeptide. In mammals, unotensin II promotes survival and regeneration of motor neurons, and also has a hypertensive effect. The unotensin II polypeptides are useful for treating polypeptides are useful for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antlhypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 2; Page 30-31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 neurodegeneration and splnal cord injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  New mammalian urotensin 11 polypeptide, useful for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (INRM ) INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptlde
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200031265-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTP 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RGSLRKALTGQDSNTVLSRLLARTRKORKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2000-400075/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Slmilarity 100.
03; Conservative
                                                                                                                                                                                                                                                                                                                                                                     sequence of murlne pro-urotensin I1 (U1I) polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     103 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                   (flrst entry)
                                                                                                               /note= "pro-segment"
87..103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98FR-0014914.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 99WO-FR02941
                                                                                                                                                                                  Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coulouarn Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "
90..103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Protein; 103 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          82.9%; 5cc
100.0%; Pr
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42pp; French.
                                                                                    "urotensin II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _ "pro-segment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "urotensin I1 peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 525;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mlsmatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; DB 21;
. 3.8e-50;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Llhrmann I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vaudry H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
RESULT 9
ANAB12501
ID ANAB1
XX ANB1
AC AAB1
XX ZANB1
XX Z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local
                                                                                                                          30-NOV-1998;
04-FEB-1999;
26-AUG-1999;
                        Mori M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         SENR; sensory epithelium neuropeptide-like receptor; urotensin II; diagnosis; G protein-coupled receptor; hypertension; GPR14; hormon kidney disease; regulator; central function; circulatory function; heart function; immune system function; digestive function;
                                                                  (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                   29-NOV-1999;
                                                                                                                                                                                                                                                                                        08-JUN-2000
                                                                                                                                                                                                                                                                                                                                              WO200032627-A1
                                                                                                                                                                                                                                                                                                                                                                                              Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                 metabolic function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bovine SENR ligand protein sequence SEQ ID NO:29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence represents a murine pro-urotensin II polypeptide. In mammals, urotensin II promotes survival and regeneration of motor neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-plegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB12501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB12501 standard; Protein; 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New mammalian urotensin II polypeptide, useful neurodegeneration and spinal cord injury -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (INRM ) INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       6
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       82 GSLRKALTGODSNTVLSRLLARTRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22 PVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-400075/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          85;
                        Abe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Page 32; 42pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                103 AA;
                     ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                     98JP-0338984.
99JP-0026848.
99JP-0239367.
                                                                                                                                                                                                                                   99WO-JP06649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98FR-0014914.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-FR02941.
                     Shimomura Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Coulouarn
                                                                                                                                                                                                                                                                                                                                                                                                                                              genital function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68.6%;
83.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 434; DB 21;
Pred. No. 4.2e-40;
                  Sugo T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                Kltada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lihrmann 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GPR14; hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vaudry H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
```

```
RESULT 6
AAU80124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                 SENR; sensory epithelium neuropeptide-like receptor; mouse;
WO200214513-A1
                                                        Misc-difference
                                                                                                                  Mus sp
                                                                                                                                          attention deficit disorder; narcolepsy; anxiety; depression; schizophrenia; G protein-coupled; receptor.
                                                                                                                                                                                                                           Mouse urotensin II-like peptide #1.
                                                                                                                                                                                                                                                                             07-OCT-2002
                                                                                                                                                                                                                                                                                                                  AAU80124;
                                                                                                                                                                                                                                                                                                                                                  AAU80124 standard; Protein; 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               like peptide or precursor, a method of screening year-compounds which can modulate the binding of urotensin II-like peptides to the SENR, the compounds thus IdentIfied, and a method of quantitating urotensin II-like peptides or their precursors. The peptides and proteins, and nucleic acids encoding them are useful in study of the physiological effects of urotensin II-like peptide/SENR interactions, and for the diagnosis and development of drugs (including gene therapy compositions) for modulating function. The present sequence represents the mouse urotensin II-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     peptide precursor protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     or salts, their precursor proteins (AAB60442, AAB60445), and to nucleic acids encoding the urotensin II-like peptides (AAF59575-AAF59576, AAF59585-AAF59589) or the urotensin II-like peptide protein precursors (AAF59574, AAF59584). The urotensin II-like peptides are ligands of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sensory epithelium neuropeptide-like receptor (SENR). The invention also relates to vectors and transformants comprising the novel nucleic acid sequences, the recombinant production of the rat or mouse urotensin II-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to novel rat and mouse urotensin II-like peptide (AAB60443-AAB60444, AAB60446, AAB60449-AAB60452), their amides, esters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 5; Page 99; 110pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Urotensin II-like peptide originating in rat or mouse and encoded nucleic acid, useful in study of its physiological effects, for diagnosis and development of drugs for controlling e.g. central nervous function -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAF59584
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCAL Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                         YCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTEAGESPGEAGPSTETPTPRGSMRKAFAGONSNTVLSRLLARTRKOHKOHGAAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MDRVPFCCLLFIGLINPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            peptides or their precursors, an antibody against a urotensin II-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-147192/15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123 AA;
                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                        /note= "Proglutamic acid or glutamine"
                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85.5%;
84.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 541;
Pred. No. 8.
                                                                                                                                                                                                                                                                                                                                                    Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 22;
.3e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       for modulating
                                                                                                                                                                                   fear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                               insomnia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      II-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
```

PD PN

21-FEB-2002

Key Peptide

Location/Qualifiers
1..89

ij

밁 Ş δÃ

```
AAY93645
ID AAYS
PT XXX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                            RESULT 7
                                                                                                                                                                                                                                                                                                                                                                              Q
                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                narcolepsy agent containing a polypeptide with a sequence identical substantially similar to a fully defined 12 amino acid sequence give the specification, and its amide, ester or their salt. The peptides have ligand activity to sensory epithelium neuropeptide-like recepto attention deficit disorder, narcolepsy, anxiety, depression, insomnly schizophrenia or fear. The polypeptides of the invention, their attention deficit disorder encoding DNAs are useful in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, insomn attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, insomn candidates for these indications and for anxiety, depression, insomn candidates for these indications and for anxiety, depression, insomn candidates for these indications and for anxiety, depression, insomn candidates for these indications and for anxiety, depression, insomn candidates for these indications and for anxiety, depression, insomn candidates for these indications and for anxiety.
                                          Rattus sp
                                                                                    Urotensin II; motor neuron; hypertensive; neurodegeneration;
spinal cord trauma; hemi-plegia; para-plegia;
                                                                              amyotrophic
                                                                                                                                                  Amino acid
                                                                                                                                                                                    25-SEP-2000
                                                                                                                                                                                                                                                     AAY93645 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  schizophrenia or fear. They are also useful for gene therapy. The polypeptide is a G protein coupled receptor protein, with ligand activity to sensor epithelium neuropeptide-like receptor. The pre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequence represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 6; Page 280; 290pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Polypeptide GPR12 with ligand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficience or narcolepsy, or for screening drug candidates for these
                                                                                                                                                                                                                                                                                                                                              121 YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This invention relates to an anti-attention deficit disorder or anti-
                                                                                                                                                                                                                                                                                                                                                                            121 YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           indications and for anxiety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N-PSDB; ABK50030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matsumoto Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-AUG-2000; 2000JP-0247968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-AUG-2001; 2001WO-JP06899
                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Н
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLOLPVLEENALRALEELERTALLOTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                       GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTADECEWK
                                                                                                                                                                                                                                                                                                                                                                                                     GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2002-329576/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TAKEDA CHEM IND LTD
                                                                                                                                    sequence of rat pro-urotensin II (UII) polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123 AA;
                                                                              lateral
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                  (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Watanabe T,
                                                                   sclerosis; antihypertensive agent
                                                                                                                                                                               entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the mouse neurotensin II-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     85.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Takahashi H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 541, DB 23;
Pred. No. 8.3e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mori
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            uence given
peptldes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           insomnla
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     deficit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       insomnia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                       120
```

0

or ln

```
ARESULT 4
AAX93647
ID AAY9
XX AAY9
AC AAY9
XX 25-S
XX Urot
KW Urot
KW Spir
KW Spir
KW Spir
KW Amyc
XX Mus
YFT Pept
FT Pept
XX W020
XX W020
XX W020
XX W020
XX W020
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    attention deficit disorder, narcolepsy, anxiety, depression, insomnia, schizophrenia or fear. The polypeptides of the invention, their precursor proteins and their encoding DNAs are useful in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, insomnia schizophrenia or fear. They are also useful for gene therapy. The polypeptide is a G protein-coupled receptor protein, with ligand activity to sensor epithelium neuropeptide-like receptor. The present sequence represents the rat sensory endothelium neuropeptide-like receptor protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Polypeptide GPR12 with ligand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxlety –
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This invention relates to an anti-attention deficit disorder or anti-
narcolepsy agent containing a polypeptide with a sequence identical or
substantially similar to a fully defined 12 amino acid sequence given in
the specification, and its amide, ester or their salt. The peptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 6; Page 277-278; 290pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-329576/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        have ligand activity to sensory epithelium neuropeptide like receptor (SENR) protein. The invention also includes a method for diagnosing
                                                                                                                                                                                                                                                                                                                                                                                      AAY93647;
                                                                                                                                                                                                                                                                                                                                                                                                                        AAY93647 standard; Protein;
                                                                                                                                                                                                                                                   spinal cord trauma; hemi-plegia; para-plegia; amyotrophic lateral sclerosis; antihypertensive agent
                  02-JUN-2000
                                                    WO200031265-A1
                                                                                                                                                                    Peptide
                                                                                                                                                                                                                   Mus sp.
                                                                                                                                                                                                                                                                                     Urotensin II; motor
                                                                                                                                                                                                                                                                                                                    Amino acid sequence of murine prepro-urotensin II (UII) polypeptide
                                                                                                                                                                                                                                                                                                                                                       25-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                   /note- "F
107..123
                                                                                                                                     21..106
                                                                                                                                                 /note= "signal peptide'
                                                                                                                                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          100.0%;
                                                                                                                                                                                                                                                                                     neuron; hypertensive; neurodegeneration
                                                                                    "utotensin 11"
                                                                                                                   "pro-segment"
                                                                                                                                                                                                                                                                                                                                                                                                                           123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 633; DB 23; Pred. No. 5.8e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 insomnia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
RESULT 5
AAB60445
ID AAB6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                         XX
So
                                                                                                                                                                                                                                                                                                                                                                                PR PR XX PAX PR XX PR XX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence represents a murine prepro-urotensin II polypeptide. In mammals, urotensin II promotes survival and regeneration of motor neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-plegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New mammalian urotensin II polypeptide, useful neurodegeneration and spinal cord injury " % \left( 1\right) =\left( 1\right) ^{2}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 2; Page 3I; 42pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (INRM ) INST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                               Urotensin II-like peptide; precursor protein; mouse; murinc; SENR ligand; drug screening; sensory epithelium neuropeptide-like receptor; diagnosis; central nervous function; cardiac function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAB60445 standard; Protein; 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mouse urotensin II-like peptide precursor protein, SEQ ID NO:26
                                                                                                                                                                                                                                                                                                                                                        Mus
                                                                                                                                                                                                                                                                                                                                                                                                            circulatory function.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24-APR-2001 (first entry)
                      Sugo T,
                                                                                                                                                                                     06-JUL-2000; 2000WO-JP04484
                                                                                                                                                                                                                                                                                                   WO200104298-A1
                                                                             (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                          18-JAN-200I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-400075/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTEAEGSLGOADPSAETPTPRGSLRKALTGODSNTVLSRLLARTRKORKOHGTAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           104;
                        Kurihara M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99WQ-FR02941.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coulouarn Y,
                                                                                                                                 99JP-0194091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85.5%;
                              Kitada C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 541; DB 21;
Pred. No. 8.3e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                              Mori M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lihrmann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ι,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vaudry
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ξ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
```

```
RESULT 2
AAB60442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Urotensin II-like peptide originating in rat or mouse and encoded nucleic acid, useful in study of its physiological effects, for
                                                                                   WPI; 2001-147192/15
                                                                                                                                                                                           08-JUL-1999;
                                                                                                                                                                                                                               06-JUL-2000;
                                                                                                                                                                                                                                                                    18-JAN-2001
                                                                                                                                                                                                                                                                                                      WO200104298-A1
                                                                                                                                                                                                                                                                                                                                                                                                       Urotensin 11-like peptide; precursor protein; rat; SENR ligand; drug screening; sensory epithelium neuropeptide-like receptor;
                                                                                                                                                                                                                                                                                                                                              Rattus
                                                                                                                                                                                                                                                                                                                                                                              circulatory
                                                                                                                                                                                                                                                                                                                                                                                               diagnosis; central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                 Urotensin 11-like peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Rat urotensin I1-like peptide precursor
                                                                                                                                                     (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB60442 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-plegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence represents a rat prepro-urotensin II polypeptide. In mammals, urotensin II promotes survival and regeneration of motor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Disclosure;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-PSDB; AAA46710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKOHGTAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2000-400075/34
                                                                AAF59574
                                                                                                                   Kurihara M,
                                                                                                                                                                                                                                                                                                                                                                              function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               123 AA;
                                                                                                                                                                                                                             2000WO-JP04484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Page 30; 42pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                         99JP-0194091.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Coulouarn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein; 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%;
                                                                                                                   Kitada C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Υ,
                                                                                                                                                                                                                                                                                                                                                                                             function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 633; DB 21;
Pred. No. 5.8e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                   Mori
                                                                                                                                                                                                                                                                                                                                                                                             cardiac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lihrmann I,
                                                                                                                                                                                                                                                                                                                                                                                           function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Vaudry H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NO:13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
```

10

Ъ δÃ В δÃ В δÃ

```
CC or salts, their precursor proteins (AAB60445), and to nucleic acids encoding the urotensin II-like peptides (AAF59575-AAF59589) or the urotensin II-like peptide protein precursors CC (AAF59574, AAF59584). The urotensin II-like peptide protein precursors CC (AAF59574, AAF59584). The urotensin II-like peptides are ligands of the CC sensory epithelium neuropeptide-like receptor (SERR). The invention also CC relates to vectors and transformants comprising the novel nucleic acid CC sequences, the recombinant production of the rat or mouse urotensin II-CC like peptides or their precursors, an antibody against a urotensin II-CC invention of urotensin II-CC invention of urotensin II-like peptides or their precursors, an antibody against a urotensin II-CC empounds thus identified, and a method of guantitating urotensin II-like peptides or their precursors. The peptides and proteins, and nucleic CC excise encoding them are useful in study of the physiological effects of urotensin II-like peptide/SENR interactions, and for the diagnosis and CC development of drugs (including gene therapy compositions) for modulating CC e.g., central nervous function, cardiac function and circulatory composition. The present sequence represents the rat urotensin II-like peptide precursor protein of the invention.
Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to novel rat and mouse urotensin II-like peptide (AAB60443-AAB60444, AAB60446, AAB60449-AAB60452), their amides, esters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 5; Page 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              diagnosis and development of drugs
123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               for controlling e.g. central nervous
```

```
밁
                                                                     ДЬ
                                                                                     QΥ
                                                                                                        Matches
121
                 121
                                  61
                                                    61
                                                                                                              Local
                                                                GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK
                                     GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK 120
                 YCI 123
YCI 123
                                                                                                               Similarity
                                                                                                       Conservative
                                                                                                               100.0%;
                                                                                                       0;
                                                                                                    Score 633; DB 22;
Pred. No. 5.8e-62;
; Mismatches 0;
                                                                                                     1ndels
                                                                                                                    Length 123;
                                                                                                   0;
                                                                                                  Gaps
                              120
                                                                                                   0;
```

ρy

Query Match

```
RESULT 3
AAU80121
AAU80121 standard;
123
```

В δõ

Rat sensory epithelium neuropeptide-like receptor (SENR) protein 07-OCT-2002 AAU80121; (first entry) Protein;

SENR; Sensory epithelium neuropeptide-like receptor; rat; fear; attention deficit disorder; narcolepsy; anxiety; depression; insomnia; schizophrenia; G protein-coupled; receptor.

Rattus

21-FEB-2002

WO200214513-A1

10-AUG-2001;

10-AUG-2000; 2000JP-0247968 2001WO-JP06899.

(TAKE) TAKEDA CHEM IND LTD

Matsumoto Y, Watanabe T, Takahashi

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Mlnlmum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hlts satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                        ŏ
                                                                                                                                                                                                                                                                                                                                        pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-831-907A-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             March 10, 2003, 17:24:52 ; Search time 29.9189 Seconds
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          908470 seqs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDRVPFCCLLFVGLLNPLLS.....TRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10:
11:
12:
13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 14:
15:
16:
100.0
100.0
85.5
85.5
85.5
85.4
46.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.3 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                           /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA198 DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA198 DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA199 DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000 DAT: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1987.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT: *
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1988.DAT: *
                                                                                                                                                                                                                                          Length DB
    123
123
123
123
123
123
123
103
103
122
      ij
AAY93644
AAB60442
AAU80121
AAY93645
AAU80124
AAY93645
AAY93645
AAY93648
AAY93648
AAY93648
                                                                                                                                                                                                                                                                                                         SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (without alignments)
547.808 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    908470
                                                                                   Rat sensory epithe
Amino acid sequenc
Mouse urotensin II
Mouse urotensin II
                                                                                                                                                                                                                                          Description
                                                                                                                                                                        Amino acid sequenc Rat urotensin II-l
```

í		81.5	86	86	90	91	91	91													63	63		98	10.	43.	43.	79.	79.	79.	79.	79.	79.	82.	82.	
	2		ω.	13.6			14.4		5	9		<u>.</u>	.7	.7	9					:-	25.8	.51	.0	:	ω.					:-		44.2		44.6	4	
	470	0	\mathbf{L}	13	14	17	17	14	17	17	17	17	20	20	20	20	24	24	24	24	85	85	103	139	104	121	121	124	124	124	124	124	124	124	\sim	
	22	22	22	23	22	23	22	21	21	22	22	23	23	22	23	22	23	22	23	22	23	21	20	20	21	23	21	23	23	22	22	22	21	21	21	
	ABB61018	AAG81162	AAB60444	AAU80123	AAE02905	AAU80125	AAB60446	AAY93646	AAY93649	AAB60443	AAE02904	AAU80122	AAU80128	AAB60451	AAU80126	AAB60449	AAU80129	AAB60452	AAU80127	AAB60450	AAU80116	AAB12497		AAY39390	AAY93640	AAU80115	AAB12496	AAU81965	ABG34042	AAB50919	AAB65230	011	66	731	AAY93639	
	Drosophila melano9	במש במס	-	t urotensin II-	tensin-li pept	ensin I	in	sequen	acid s	rotensin	censin-II pept	tensin II-	in I	Ξ	٠	urotensin 1	Η	Mouse urotensin II	Rat urotensin II-1	urotensin	sensory epi	SENR Liga	an Urotensin	in	റ	sensory epi	SENR ligan	an PRO	Human Pro peptide	1068	RO1068	mmunost	Mcmbrane-bound pro	Ð	ത	

ALIGNMENTS

AAY93644 RESULT 1

AAY93644 standard; Protein; 123

AAY93644;

25-SEP-2000 (first entry)

Amino acid sequence of rat prepro-urotensin II (UII) polypeptide

Urotensin II; motor neuron; hypertonsive; neurodogeneration; spinal cord trauma; hemi-plogia; para-plegla; amyotrophic lateral sclerosis; antihypertensive agent. Key Rattus sp (INRM) INST NAT SANTE & RECH MEDICALE 26-NOV-1998; 26-NOV-1999; 02-JUN-2000 WO200031265-A1 Peptide Peptide Peptide 98FR-0014914. 99WO-FR02941. /note= "pro-segment peptlde" 110..123 21..109 /note= "signal peptide" Location/Qualifiers /note≖ "urotensin II peptlde"

293.5 293.5

434

Amino acid sequenc Amino acid sequenc Bovine SENR ligand Cow sensory epithe

DЬ

325

355

```
RESULT
Q9ZWB6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Qy
                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                             δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                Douglas S., Zauner S., Fraunholz M., B. Wu X., Reith M., Cavalier-Smith T., Ma "The highly reduced genome of an enslavature 410:1091-1096(2001).

EMBL; AF165818; AAK39871.1; -.

InterPro; IPR000795; EF_GTPbind.

InterPro; IPR001810; F-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9ZWB6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Luros S., Schwartz J., Shinn P., Toriumi M., Vysotskaia V.S., Walker M., Yu G., Ecker J., Theologis A., Davis R.W.; Submitted (JAN-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AC003027; AAD10674.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core e eurosids II; Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-MAY-1999 (TrEMBLrel.
01-MAY-1999 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
FIMIL:11 protein.
                                                                                                                                                                                                                                                               01-OCT-2001 (TrEMBLrel. 18, 01-OCT-2001 (TrEMBLrel. 18, 01-MAR-2002 (TrEMBLrel. 20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=CV. COLUMBIA; Federspiel N.A., Pal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Arabidopsis thaliana (Mouse-ear cress).
Eukaryota, Viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosidae;
                                                                                                                                                                                                                                                                                                         Q98RS6;
                                                                                                                                                                                                                                                                                                                     Q98RS6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR002048; EF-hand.
Pfam; PF00036; efhand; 1.
PROSITE; PS00018; EF_HAND; UNKNOWN_1.
SEQUENCE 534 AA; 61847 MW; 4045736265759196 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Altafi H., Araujo R., Huizar L., Rowley D.,
Gonzalez A., Kremenetskaia I., Kim C., Lenz
GTP-binding;
             PRINTS; PR00315; ELONGATNFCT. PROSITE; PS50181; FBOX; 1.
                                       Pfam; PF00009; GTP_EFTU;
                                                                                                                                            MEDLINE=21223349; PubMed=11323671;
                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                    NCBI_TaxID=55529
                                                                                                                                                                                                             Nucleomorph
                                                                                                                                                                                                                           Guillardia theta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                      462
                                                                                                                                                                                                                                                                                                                                                                                                                                         405
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         13
                                                                                                                                                                                                                                                                                                                                                                                                             74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23 LLDSREISF----QLSAPHEDARLTPEELERASLLQILPEMLGAERGDI-----LRKADS 73
                                                                                                                                                                                                                                                   small nuclear ribonucleoprotein 116 kDa subunit
                                                                                                                                                                                                                                        SNRNP
                                                                                                                                                                                                                                                                                                                                                                                                             STNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPD 117
                                                                                                                                                                                                                                                                                                                                                                                    SANVFNILFNLNKFMAFETRDPFLI------
                                                                                                                                                                                                                                                                                                                                                                                                                                      VITSNEMQFFFEEQL---HRMECITQEAVLFSDILCQIIDMIGPEKENCITLQDLKGSKL 46:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                              Cryptophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
 Nucleocapsid;
                                                                                                                                                                                                                        (Cryptomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Palm C.J., Conway A.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11.4%;
26.0%;
                                                                                                                                                                                                Cryptomonadaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10,
Protein biosynthesis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21;
                                                                                                                                                                                                                                                               Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 74.5;
Pred. No. 24;
                                                                                                                                                                                                                    phi).
                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                     M., Beaton M., Penny S.,
T., Maier U.G.;
enslaved algal nucleus.";
                                                                                                                                                                                                                                                                                                                     827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               534
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  y D., Buehler E., Dur
Lenz C., Li J., Liu
                                                                                                                                                                                                                                                                                                                                                                                     - RQEREDPN
                                                                                                                                                                                                                                                                                                                    Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                  Guillardia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ນ
ນ.
                                                                                                                             Penny S., Deng L.T.,
Ribonucleoprotein
                                                                                                                                                                                                                                                                                                                                                                                      494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dunn .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N.F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4:
```

4

```
RESULT 15
Q8VZC7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                       δ
                                                                                                                                                                                                                망
                                                                                                                                                                                                                                                              Qy
                                                                                                                                                                                                                                                                                                                                                                                                                              ACCOMPANDA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               멍
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SO
                                                                                                         DЬ
  Job time
                           Search
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q8VZC7
Q8VZC7;
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Spermatophyta; Magnoliophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Rosia eurosids II; Brassicales; Brassicaceae; Arakidana; NCBI_TaxID-3700:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted (NOV-2001) to the EMBL; AY065063; AAL57696.1; InterPro; IPR001611; LRR.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cheuk R., Chen H., Kim C.J., Koesema E., Meyers M.C., Banh J.,
Bowser L., Carninci P., Chang E., Dale J.M., Goldsmith A.D.,
Hayashizaki Y., Ishida J., Jones T., Kamiya A., Kariin-Neumann G.,
Hayashizaki Y., Lishida J., Jones T., Kamiya A., Kariin-Neumann G.,
Kawai J., Lam B., Lee J.M., Lin J., Miranda M., Narusaka M.,
Nguyen M., Onodera C.S., Palm C.J., Ouach H.L., Sakurai T., Satou
Seki M., Southwick A., Tang C.C., Toriumi M., Wu H.C., Yamada K.,
Yamamura Y., Yu G., Yu S., Shinozaki K., Davis R.W., Theologis A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AT5g45510/MFC19_18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Arabidopsis cDNA clones.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ecker J.R.;
                                                                                                         438 ASGENPILLLAYKLFKTDGPLKD-TILDCFW 467
                                                                                                                                                                                                                398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               192
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           251
completed: March ne : 26.7946 secs
                                                                                                                                                             90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                              30 SFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKFQD
                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FNLNQFSGLYMISQPSICLSQKDLSERIWNDKK 283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ELKMTPDEVQK-RILQILDELNYLALHKVINKSVLSKKNINFFNPLNDNVCFSALSQGWI 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DARLTPEELERASLLQILPEMLGAERGDILRK---ADSSTNIFNP-----
                                                                                                                                                                                                           SYKLNKDEEE-RLLKEKIEM-----VLSAERGN---PSDQESSSESPK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RKFQDFSG----QDPNILLSH--LLARIWKPYK 111
                                                                                                                                                       FSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PF00560;
                                                                                                                                                                                                                                                                                                                          l Similarity
                                                                                                                                                                                                                                                                                                                       26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                827
                                                                                                                                                                                                                                                                                                                                                                                                                              1202 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel. 20, Created)
(TrEMBLrel. 20, Last seq
(TrEMBLrel. 21, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         LRR;
                        10,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         G
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96891 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11.4%;
28.0%;
                                                                                                                                                                                                                                                                                                                                             11.4%; 28.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                              135815
                        2003,
                                                                                                                                                                                                                                                                                                                    19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16;
                                                                                                                                                                                                                                                                                                                                                                                                                           MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 74.5;
                           17:46:33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred.
                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                        Score 74.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4FAE10A0DB93D0A3 CRC64;
                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                           15F884681326E9DA CRC64;
                                                                                                                                                                                                                                                                                                                                                ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1202
                                                                                                                                                                                                                                                                                                                                                  67;
                                                                                                                                                                                                                                                                                                                                                                        DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DΒ
                                                                                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30;
                                                                                                                                                                                                                                                                                                                    25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                  Length 1202;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eudicots; Rosidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ----RGNL
                                                                                                                                                                                                                                                                                                                  21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Satou M.,
                                                                                                                                                                                                           ---К 437
                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  84
                                                                                                                                                                                                                                                                                                                  5,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   5
```

```
RESULT 11
Q9AW95
    ρ
                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                Ωy
                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 10
Q9YAQ6
                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SQR
                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                  Q9AW95
Q9AW95;
Q9AW95;
Ol-JUN-2001 (TrEMBLrel. 17, C)
Ol-JUN-2001 (TrEMBLrel. 17, L)
Ol-JUN-2002 (TrEMBLrel. 21, L)
Catharanthus roseus (Rosy periwinkle) (Madagascar periwinkle) Eukaryota; viridiplantae; Streptophyta; Embryophyta; Tracihoph Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; euasterids I; Gentlanales; Apocynaceae; Rauvolfioi
                                                                            Anthranilate
                                                                                                                                                                                                                                                                                                                                                                                                       Hypothetical
SEQUENCE 43
                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            crenarchaeon, Aeropyrum pernlx K1.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Jin no K., Takahashi M., Sekine M., Baba S.-I., Ankai A., Ko Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9YAQ6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9YAQ6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROSITE; PS00217; SUGAR_TRANSPORT_2; UNKNOWN_1.
Hypothetical protein; Complete proteome.
SEQUENCE 392 AA; 46122 MW; D5C3DC359083A350 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=99310339; PubMed=10382966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Aeropyrum pernix.
Archaea; Crenarchaeota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=56636;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desulfurococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Hypothetical protein APE1887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    319
                                                                                                                                                                                                                            224
                                                                                                                                                                                                                                                                                     171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             274
                                                                                                                                                                                                                                                         72
                                                                                                                                                                                                                                                                                                                  23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12 IGFLNPLLSLPLLDSREISFOLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKA 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72
                                                                                                                                                                                                                                                                                                             LLDSREISFQLSAPHED-ARL-----TPEELERASLLQILPEMLGAE---RGDILRKA 71
                                                                                                                                                                                                                           DG-----EPKKSLRVYR-------AIKRMWKSRGLDAVSPACWWFY 257
                                                                                                                                                                                                                                                       DSSTNIENPRGNLRKEQDESGQDPNILLSHLLARIWKPY-KKRETPDCFWKY 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NKRHEVL---GDLRKFAEQMADKIKWDTSNKNYILTHNVSSVDWQHYK 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IPFLKELLKIRKKQGRKLMFE----HESC---GQQLKRA-----MIPLEKGELIKDK 318
                                                                                                                                                                                                                                                                                  LVSSR-----AWHEDLARLGVELVEVDPIEFARYVAEESVPESLGEEVLRRGEVLDLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DSSTNIENPRGNLRKEQD-----FSGQDPNILLSHLLARI-WKPYK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                  AP000062; BAA80892.1; -
                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                 6:83-101(1999
                                                                                                                                                                                                                                                                                                                                                                                                    al protein; Complete proteome.
433 AA; 46766 MW; 2F0EF190D5EDD5B2 CRC64;
                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                         synthase alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Aeropyrum
                                                                                                                                                                                                                                                                                                                                                            11.7%;
29.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Thermoprote1;
                                                                                                                                                                                                                                                                                                                                              13;
                                                                      Last sequence update)
Last annotation update)
subunit (EC 4.1.3.27).
                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                     Score 76.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pred. No. 8.8;
5; Mismatches
                                                                                                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 77;
                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                             NO.
                                                                                                                                                   809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desulfurococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8.8;
                           Embryophyta; Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 17; Length 392;
                                                                                                                                                   ⋛
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ⋛
                                                                                                                                                                                                                                                                                                                                                                         DB 17;
                                                                                                                                                                                                                                                                                                                                             29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      31;
                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                        Length 433;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
   Rauvolfioideae
                                                                                                                                                                                                                                                                                                                                           37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Kosugi H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ۲,
                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                    223
                                                                                                                                                                                                                                                                                                                                           7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 12
Q9LTB5
Ş
                                                      20
                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                    Matches
                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                             Q9LTB5;
Q9LTB5;
01-OCT-2000
                                                                                                                                                                                                                                                                                                                        01-OCT-2000 (TrEMBLrel. 15, Created)
01-OCT-2000 (TrEMBLrel. 21, Last sequence update)
01-UNN-2002 (TrEMBLrel. 21, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Genomic DNA, chromosome 5, TAC clone:K14A3.
Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; viridiplantae; Streptophyta; Embryophyta; Tracheophyta;
Spermatophyta; Magnollophyta; eudicotyledons; core eudicots; Rosid
eurosids II, Brassicales; Brassicaceae; Arabidopsis.
                                                                                                                                                                                                "Structural analysis of Arabidopsis thaliana chromosome 5. XI."; Submitted (APR-1999) to the EMBL/GenBank/DDBJ databases. EMBL; AB025609; BAA98109.1; -.
                                                                                                                                           SEQUENCE
                                                                                                                                                        InterPro; IPR000679; Znf_GATA.
Pfam; PF00320; GATA; 1.
SMART; SM00401; Znf_GATA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIMITS; PRO0095; ANTSNTHASET PRODOM; PD000779; Chorismate_bind; Prodom; PD000779; Chorismate_bind; 1.
                                                                                                                                                                                                                                          Kaneko T., Katoh T., Asamizu E.,
Tabata S.;
                                                                                                                                                                                                                                                                      STRAIN-COLUMBIA,
                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; Q06128; 1QDL.
InterPro; IPR0005256; Anth_synthI.
InterPro; IPR000350; Chorismate_bind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRAIN-G.DON; TISSUE-CELL SUSPENSION;
                                                                                                                                                                                                                                                                                                               NCBI_TaxID=3702;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pram;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (NOV-1999) to the EMBL; AJ250008; CAC29060.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            alpha-subunit of the enzyme anthranilate synthase from Catharanthus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 roseus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bongaerts R.J.M., Meijer A.H., Hoge J.H.C., Verpoorte R.; "Molecular cloning and characterization of a cDNA clone encoding the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=4058;
{1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vinceae; Catharanthus
                            265
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             159
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        yase
 91
                                                        46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 YKLASCCLLFIGFLNPLLSLPLLD------SREISFQLSAPH------
 SG---
                         EEEQQKLMKLLPQVDSVDRPDSLRSMFESSQFKENLSLFQQLVADGVFETNSSYAKLEDI 324
                                                     ELERASLLQILPEMLGAERGDILRKADSST-------NIFNPRGNLRKFQDF 90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NMVTVMDHRQG--RRVEQYE-EDPMVVPRRIMEK-WKPQRTEELPEAF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DSSTNIENPRGNLRKFQDFSGQDPNILLSHLLAR1WKPYKKRETPDCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HLTPVLAYRCLVKEDDREAPSFLFESVEPGLKVSNVGRYSVIGAQPTM-----EIVAKE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -----RASLLQILPEMLGAERGDILRKA 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FRQLACCSLHL----LVLSSPLLDKCSAVSPPSFVDHSAKFKVAAKHGNLIPLYRPIFSD 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PF00425; chorismate_bind; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35;
                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                          461 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          608 AA;
                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
-QDPNILLSHLLARIWKPYKKRETPDC 118
                                                                                                                                                    ZnF_GATA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68263 MW;
                                                                                                                                           51682 MW;
                                                                                                11.5%;
26.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.68;
                                                                                   13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28;
                                                                                                Score 75; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                          49FD67D43F3D52DC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DEE052CE5A1FC15E CRC64;
                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                       Sato S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       461 AA
                                                                                                 18;
                                                                                                              ВС
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 10;
                                                                                                                                                                                                                                                       Nakamura
                                                                                                             10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 41;
                                                                                   32;
                                                                                                                                                                                                                                                                                                                                         core eudlcots; Rosidae;
                                                                                                             Length 461;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             202
                                                                                                                                                                                                                                                         Kotani H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                64;
                                                                                   24;
                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      37
                                                                                  4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
```

```
Q9XS14
ID Q
AC Q
DT Q
DT 0
DT 0
DT 0
OC DE M
OC AP
                                                                                                                                                                                                                                                                                                                                                                                                                       Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                       RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RARARA RAARA RAARA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RA Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
RA de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA Dodson K., Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P.,
RA Durbin K.J., Evangelista C.C., Ferriara S., Fleischmann W.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M.,
RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibegwam C.,
Jalali M., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A.,
RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z.,
RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Liin X.,
RA Merkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A.,
RA Melson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M.,
RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G.,
RA Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E.,
Syirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J.,
RA Ye J., Yeh R.-F., Zaver J.S., Zhan M., Zhang S., Yao Q.A.,
RA Ye J., Yeh R.-F., Zaver J.S., Zhan M., Zhang S., Yao Q.A.,
RA Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.,
RThe genome sequence of Drosophila melanogaster.";
Science 287:2185-2195(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00628; PHD; 3. Pfam; PF00856; SET; 1. SMART; SM00542; FYRN; 1. SMART; SM00542; FYRN; 1. SMART; SM00249; PHD; 4. SMART; SM00249; PHD; 4. SMART; SM00508; POSTSET; 1.
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Labroide
                                                                                                                                              Q9XS14;
01-NOV-1999 (TrEMBLrel. 12,
01-NOV-1999 (TrEMBLrel. 12,
01-JUN-2002 (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                              Q9XS14
                                                                                         Aulonocara hansbaenschi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SMART; SM00184; RING; 3
SMART; SM00317; SET; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AE003704; AAF55041.2; -. HSSP; P20393; 1A6Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS50280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR001965; InterPro; IPR001841;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR003889;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FlyBase; FBgn0003862; trx.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SIMILARITY: CONTAINS 1 SET DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                       903 TASSSSPSVVASTSVK--WK 920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           857
                                                                                                                                                                                                                                                                                                                                 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89 DFSGQDPNILLSHLLARIWK 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29
                                                                                                                 class I antigen (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ISFOLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKFQ 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ĮSFQLPAAH----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  IPR003888;
IPR003616;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IPR001214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3726 AA;
                                                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SET;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 12.1%;
30.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FYrich_C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PostSET.
SET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       400095 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Znf_ring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Znf_PHD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -RSRLSAILPPGM---RGEAAAREEKSAELLSPTGSLRFTS 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12;
                                                                                                                                           Last sequence update)
Last annotation update)
                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 79; Pred. No.
                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E3DDB8F062BD7796 CRC64;
                                                                                                                                                                                                                                                                     364
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 5;
                                                                                                                                                                                                                                                                  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 3726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inde1s
  Labroidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
```

ζ

```
RESULT
030312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                          Klenk H.-P., Clayton R.A., Tomb J.-F., White O., Nelson K.E., Ketchum K.A., Dodson R.J., Gwinn M., Hickey E.K., Peterson J.D., Richardson D.L., Kerlavage A.R., Graham D.E., Kyrpides N.C., Fleischmann R.D., Quackenbush J., Lee N.H., Sutton G.G., Gill S., Kirkness E.F., Dougherty B.A., McKenney K., Adams M.D., Loftus B. Peterson S., Reich C.I., McNeil L.K., Badger J.H., Glodek A., Zho Overbeek R., Gocayne J.D., Weidman J.F., McDonald L., Utterback T Cotton M.D., Spriggs T., Artiach P., Kaine B.P., Sykes S.M., Sadow P.W., D'Andrea K.P., Bowman C., Fujii C., Garland S.A., Mason T.M., Olsen G.J., Fraser C.M., Smith H.O., Woese C.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                030312
               EMBL; AE001113; AAB91305.1; TIGR; AF2358; -.
                                                                                                                                                                                                                                STRAIN=VC-16 / DSM 4304 / ATCC 49558;
MEDLINE=98049343; PubMed=9389475;
                                                                                                                                                                                                                                                                                                                   Archaea;
                                                                                                                                                                                                                                                                                                                                              Hypothetical AF2358.
                                                                                                                                                                                                                                                                                                                                                                         01-JAN-1998
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD000050; MHC_I; 1.
SMART; SM00407; IGC1; 1.
Glycoprotein; Transmembrane.
NON_TER 364 364
                                            Nature
                                                       reducing
                                                                                   Venter J.C
                                                                                                                                                                                                                                                             SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                   Archaeoglobaceae; Archaeoglobus
                                                                                                                                                                                                                                                                                                                               Archaeoglobus fulgidus.
                                                                                                                                                                                                                                                                                                                                                                                                   01-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00047; ig; 1. Pfam; PF00129; MHC_I; 1.
                                                              "The complete genome sequence of the hyperthermophilic, sulphate-
                                                                                                                                                                                                                                                                                       NCBI_TaxID=2234;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR003597; Ig_c1.
InterPro; IPR003006; Ig_MHC.
InterPro; IPR001039; MHC_I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MICROGLOBULIN) (BY SIMILAR EMBL; AF038551; AAD37814.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR01638; MHCCLASSI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -!- SUBUNIT: DIMER OF ALPHA CHAIN AND A BETA CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Class I MHC genes polymorphism.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sato A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=97293242; PubMed=9148790;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cichlidae; Aulonocara
NCBI_TaxID=27781;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          303 NIRK-ETPSGMLISIIASVVVALILVLVAVGVAVYKKKKERNT 344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   mmunogenetics 46:63-72(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83 NLRKFQDFSGQDPNILLSHLLA-----RIWKPYKKRET 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          23 LLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FUNCTION: INVOLVED IN THE PRE IMMUNE SYSTEM (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ILRNNDGTFQMSVDLKLSSDTPEEWER---YDCVFHLSGVE--DIVTKLNQALIRTNPEG
                                           ng archaeon Archaeoglobus fulgidus.";
390:364-370(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                Euryarchaeota; Archaeoglobi; Archaeoglobales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Klein D.,
IPR003662; sub_transporter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               364 AA;
                                                                                                                                                                                                                                                                                                                                                                        (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                  (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                           protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sultmann H., Figuer of cichlid fishes:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41428 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                          el. 05,
el. 05,
el. 20,
AF2358
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11.8%;
29.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                  Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 77;
                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRESENTATION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            051914ED23D3CB8F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Figueroa F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No
                                                                                                                                                                                                                                                                                                                                                                                                                           392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        coa F., O'Huigin C., Klein J. identification, expression,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 7;
                                                                                                                                                                                                                                                                                                                                                                                                                           AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FOREIGN ANTIGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 364;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (BETA-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Klein J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16;
                                                                                                                                              Zhou L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           82
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                                                             å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                Q9W2R1;
Q9W2R1;
01-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00646; F-box; 1.
SMART; SM00256; FBOX; 1.
PROSITE; PS50181; FBOX; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EU Arabidopsis sequencing pr
Submitted (APR-2000) to the
EMBL; AL162973; CAB86047.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bevan M., Terryn N., Ardiles W., Buysshaert C., Dasseville
De Clerck R., De Keyser A., Neyt P., Rouze P., Van Den Dael
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Submitted (APR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rudd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Villaroel R., Glelen J., Van Montagu M., Bancroft I., Mewes H.W.
Harrls N.L., Harvey
Hostln D., Houston
Jalali M., Kalush I
                                                                                                                                                                                                                                                   Drosophlla melanogaster (Frult fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopteryyota; Diptera; Brachycera; Muscomorpha;
Ephydroldea; Drosophllldae; Drosophila.
                                                                                                                                                                                                                                                                                                   CG9993 proteln.
                                                                                                                                                                                                                                                                                                              01-MAY-2000 (TrEMBLrel. 01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hypothetical protein..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR001810; F-box.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                  MEDLINE=20196006; PubMed=10731132;
                                                                                                                                                                                                              STRAIN-BERKELEY;
                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   176
                                                                                                                                                                                                                                                                                                                                                                                                       293
                                                                                                                                                                                                                                                                                                                                                                                                                          101
                                                                                                                                                                                                                                                                                                                                                                                                                                              236
                                                                                                                                                                                                                                                                                                                                                                                                                                                               58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      4 LASCCLLFIGFLNPLLSLPLLDSREISFQLSAPH----EDARLTPEELERASLLQ--ILP 57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       s:
                                                                                                                                                                                                                                                                                                                                                                                                                          HLLARIWKPYKKRE 114
                                                                                                                                                                                                                                                                                                                                                                                                                                             MQIVAPYIHYLRLRDSEAHCTFVDVSSLTEANVDVSTFHPR---TCYHDFDPLDPHDLLV 292
                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMLGAERGDILRKADS----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LTDCTMSDESFLEILSGCPILESLSLKFCMSLKYLNLSKSLRLTRLEIERISYIRAPMLS
                                                                                                                                                                                                                                                                                                                                                                                                      -MVQTMLKTFQKVE 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Slmllarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lemcke K., Mayer K.F.X.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 469 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                 (TremBLrel.
                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY,
           K.A., Howland T.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  53949 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            to the EMBL/GenBank/DDBJ databases
 Karpen
                                                                                                                                                                                                                                                                                                              13,
13,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----STNIFNPRGNLRKFQDFSGQDPNILLS 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              project;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21; Mismatches
                                                                                                                                                                                                                                                                                                             Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 79.5; D
Pred. No. 6.1;
                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  4113E6184A447C8E CRC64;
 Ke 2.,
                                                                                                                                                                                                                                                                                                                                                       543 AA
           Wei M.-H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Van Den Daele
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
            Ibegwam
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Š
             PAGE TARA PAGE T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9VFL1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Shee B.C., Siden-Klamos I., Simpson M., Skupski M.P., Smith T., Spier E., Spradling A.C., Stepleton M., Strong R., Sun E., Sylirskas R., Tector C., Turner R., Venter E., Wang A.H., Wang X., Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J., Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A., Yeh R.F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L., Yeh R.F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L., Cheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu S., Zhu X., Smith H.O., Gibbs R.A., Myers E.W., Rubin G.M., Venter J.C.; "The genome sequence of Drosophila melanogaster."; science 287:2185-2195(2000).
EMBL; AE003452; AAR46629.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X., Liask P., Lei Y., Lievitsky T.C., McLeod M.P., McPherson D., Markulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., Mount S.M., Moy M., Murphy B., Murphy L., Muzny D.M., Nelson D.L., Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M., Palazzolo M., Pittman G.S., Pan S., Pollard J., Purl V., Recse M.G., Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H., Reinert K., Remington K., Saunders R.D.C., Scheeler F., Shen H.,
Adams M.D., Celniker S.E., Holt R.A., Evans C.A., Gocayne J.D., Amanatides P.G., Scherer S.E., Li P.W., Hoskins R.A., Galle R.F., George R.A., Lewis S.E., Richards S. Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D., Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M., Beeson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            O9VFL1;
01-MAY-2000 (TrEMBLrel.
01-MAR-2001 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FlyBase; FBgn0034553; CG9993.
InterPro; IPR000873; AMP-bind
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Drosophila melanogaster (Fruit fly).
Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda; Insecta;
Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Trx protein.
TRX OR CG8651
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q9VFL1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00501; AMP-binding; 1
PROSITE; PS00761; SPASE_I_3; SEQUENCE 543 AA; 60344 MW;
                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-20196006; PubMed-10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. STRAIN-BERKELEY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 InterPro; IPR000508; SigPTase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             390 RWGGYYHNPQETQVTVTPDGKW 411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 271 LVERHQVSFVLTVPHHMALLAKSPERQELAAKMQCVQSFVCSGSKVPMGIWRQLYELLGA 330
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 LLDSREISFQLSAPHEDARL--TPEELERASLLQI------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NREAVLYGLTETGGISKNVGGPLGSEGRLLRNVQVRVVDPHGQSLGPN-QTGQILVRLNL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ERGDIL----RKADSSTNIFNPRGN----LRKFQ----DFSGQD--PNILLSHLLARI--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               l Similarity
40; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -KKRETPDCFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           12.1%; 28.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13,
16,
21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 79.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A6A9B06E1457DCF9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3726 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 5; Length 543;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               42;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9;
```

```
A DA CONTRACTOR OF THE CONTRAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT
Q95K72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
receptor, SENR (GPR14).";
Biochem. Biophys. Res. Comm
EMBL; AB063246; BAB60889.1;
                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
TISSUE=SPINAL CORD;
Sugo T., Mori M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Q95K72;
                                                                                               MEDLINE=20017983; PubMed=10548501; Mori M., Sugo T., Abe M., Shimomura Y., Kurkuchi K., Shintani Y., Kurokawa T., Onda
                                                                                                                                                                 SEQUENCE FROM N.A.
TISSUE=SPINAL CORD;
                                                                                                                                                                                                                                                                                                                                                                                                                           01-DEC-2001 (TremBLrel.
01-DEC-2001 (TremBLrel.
01-MAR-2002 (TremBLrel.
                                                              "Urotensin II is the endogenous
                                                                                       Fujino M.;
                                                                                                                                                                                                                                  Submitted
                                                                                                                                                                                                                                                                                                                                                    Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                            Sus scrofa (Pig).
                                                                                                                                                                                                                                                                                                                                                                                                            Urotensin II transcript
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam: PF02083; Urotensin_II; 1.
PROSITE: PS00984; UROTENSIN_II; UNKNOWN_1
SEQUENCE 121 AA; 13580 MW; 656E4B01AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        receptor, SENR (GPR14).";
Biochem. Biophys. Res. Commu
EMBL; AB063245; BAB60888.1;
EMBL; AB063244; BAB60887.1;
                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-SPINAL CORD;
MEDLINE-20017983; PubMed-10548501;
MORI M., Sugo T., Abe M., Shimomura Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mori M., Sugo .., ... ... Kurokawa
Kikuchi K., Shintani Y., Kurokawa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. TISSUE=SPINAL CORD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=SPINAL CORD;
Sugo T., Mori M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-MAR-2002 (TrEMBLrel. 20, Last annotation update) Urotensin II transcript variant 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Urotensin II is the endogenous ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (JUN-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mammal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sus scrofa (Pig)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTDEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WKYCV 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAEAGEDLREADAGMDIFYPRGEMRK--AFSGQDPNIFLSHLLARIKKPYKKRGPPSECF 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETP-DCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  l Similarity
77; Conser
          SENR (GPR14).";
Res. Commun.
                                                                                                                                                                                                                              (JUN-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                          Chordata; Craniata; Vertebrata; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                              ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               52.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cetartiodactyla;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ţ
                                                                                                                                                                                                                                                                                                                                                                                                  . 19, Created)
. 19, Last sequence upd
.. 20, Last annotation upd
xt variant 2.
                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Commun.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         the
                                                                                                                                                                                                                       EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 342.5; |
Pred. No. 3.2e
12; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                    265:123-129(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata;
actyla; Suina; Suidae;
                                                            ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       656E4B01AF69101B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               265:123-129(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              a Y., ..
Onda
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85
                                                     of a G-protein-coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         of a
                                                                                               Kurihara M., Kita
nda H., Nishimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3.2e-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kurihara M., Kit.
nda H., Nishimura
                                                                                                                                                                                                                                                                                                                                                                                                                         on update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G-protein-coupled orphan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        31;
                                                                                                                                                                                                                   databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                              Euteleostomi;
Sus.
                                                                                                 Kitada
mura O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kitada
.mura O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121;
                                                                                                                    0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               c.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4;
```

þ

```
RESULT
Q47972
ID 7972
AC Q4
AC Q4
DT Q1
DT 0:
DT 0:
DT 0:
C A B
OC B
C B
C B
C B
C B
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
C C C
RESULT
Q9LYZ2
ID Q9
AC Q9
AC Q9
AC P0
DT 01
DT 01
DT 01
DT 01
DT 02
CS Ar
OC Eu
OX NC
RN [1
                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                       Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DR
DR
SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                       Q9LYZ2;
01-OCT-2000
01-OCT-2000
                              Arabidopsis thaliana (Mouse-ear cress).
Eukaryota; Viridiplantae; Streptophyta; Embry.
Spermatophyta; Magnoliophyta; eudicotyledons;
eurosids II; Brassicales; Brassicaceae; Arabi
                                                                                                                                                   01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; L22
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1996
01-NOV-1996
01-OCT-2001
                                                                                                                   Hypothetical F9G14_240.
                                                                                                                                                                                                                                      Q9LYZ2
                  NCBI_TaxID=3702
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       в1р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (JUL-1993) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gropp F., Gropp R., "The fourth gene in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q47972;
Q47972;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=R1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxlD=2242;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Halobacterium salinarum.
Archaea; Euryarchaeota; Halobacteria;
Halobacteriaceae; Halobacterium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001483; Urotensin_II.
Pfam; PF02083; Urotensin_II; 1.
PROSITE; PS00984; UROTENSIN_II; UNKNOWN_1.
SEQUENCE 85 AA; 9644 MW; F519CFEDFCBAA863 CRC64;
                                                                                                                                                                                                                                                                                                                                       115
                                                                                                                                                                                                                                                                                                                                                                    103 LARIWKPYKKRE 114
                                                                                                                                                                                                                                                                           Ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                      43 TPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHL 102
                                                                                                                                                                                                                                                                                                                                                                                                                  63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120 WKYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       protein
                                                                                                                                                                                                                                                                                                                                                                                                      TVEDIERVRQRRLVQELTGAIDGTITYRLSRTHHVADLRGRVRL---
                                                                                                                                                                                                                                                                                                                                 LAPIAKAYNKRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WKYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               L22007; AAD15050.1;
NCE 140 AA; 15516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETP-DCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----EPLPFSDAGMDIFYPRGEMRK--AFSGQDPNIFLSHLLARIKKPYKKRGPPSECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MSKLVP-CLLLLGCLGLLFALPVPDSRK----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
53; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                 (TrEMBLrel. 15, Created)
(TrEMBLrel. 15, Last seq
(TrEMBLrel. 17, Last ann
l 53.9 kDa protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel. (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           85
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124
                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15516 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Betlach
the bop
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01,
01,
18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 80; UB I
Pred. No. 1.2;
16; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .
∩
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Created)
                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8C14F71C32867641 CRC64;
                                                                                                                                                 sequence update) annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cluster is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ŏ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  215.5;
                                                                                                                                                                                                                                469
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Halobacteriales;
                              Arabidopsis
                                                                  Embryophyta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              4.1e-15;
                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ۲,
                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               co-regulated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21;
                                                  core
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                              eudicots;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                              Tracheophyta;
                                                                                                                                                                                                                                                                                                                                                                                                      -PDTVIESV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ω,
                                              Rosidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            dog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     4
```

ۈ

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mlnimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satlsfylng chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE:
                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                              Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein -
                                                                                                                                                                     ő
pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                  577
342.5
215.5
80
                                                                                                                                                                     Score
79
77
76.5
76.5
74.5
74.5
74.5
                                                                                                79.5
79.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           length: 0
length: 2000000000
                                                                                                                                                                                                                                                              1:
2:
3:
4:
4:
5:
7:
7:
8:
9:
110:
112:
112:
114:
115:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-831-907A-1
655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         march 10, 2003, 17:35:28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             671580 segs, 206047115 residues
                                                                                                                                                                      Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Minimum Match
888.1
52.3
32.9
12.2
12.1
12.1
11.8
11.8
11.8
11.8
11.7
11.7
                                                                                                                                                                                Query
                                                                                                                                                                                                                                                                                                                                                                                                                                  SPTREMBL_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MYKLASCCLLFIGFLNPLLS.....RIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                      sp_archea:*
                                                                                                                                                                                                                                                                                                                                                                                                              sp_bacteria:*
                                                                                                                                                                                                                                                                                                            sp_rodent:*
sp_virus:*
                                                                                                                                                                                                                                                                                                                                            sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                    sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                                    sp_fungi:*
                                                                                                                                                                                                                                                                             sp_vertebrate:*
sp_unclassified:*
sp_rvirus:*
                                                                                                                                                                                                                                                                                                                                                    sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                              sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                        sp_mamma1:*
                                                                                                                                                                                                                                                                                                                                                                                          sp_human:*
                                                                                                                                                                                                                                                              sp_archeap: *
                                                                                                                                                                                                                                                                       sp_bacteriap:*
                                                                                                                                                                                                                                                                                                                               sp_plant:*
140
469
543
3726
364
392
433
608
461
534
827
1202
                                                                                                                                                                       DВ
                             10
                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           90
         Q8TAU6
Q95K72
Q95K72
Q47972
Q47972
Q9W2R1
Q9W2R1
Q9VFL1
Q9VS14
Q9XS14
Q9XS14
Q9XS14
Q9XS16
Q9XW95
Q9ZW95
Q9ZW95
Q9ZW95
Q9BRS6
Q9BRS6
                                                                                                                                                                       IJ
                                                                                                                                                                                                     SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       search time 23.7946 Seconds
(without alignments)
1073.767 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             671580
030312 archaeoglob

Q9yaq6 aeropyrum p

Q9aw95 catharanthu

Q91tb5 arabidopsis

Q9zwb6 arabidopsis

Q9Brs6 guillardia

Q8vzc7 arabidopsis

Q9fhi5 arabidopsis
                                                                                                                     Q8tau6 homo sapien
Q95j46 sus scrofa
Q95k72 sus scrofa
Q47972 halobacteri
                                                                                                  Q9lyz2 arabidopsis
Q9w2rl drosophila
                                                                              Q9vfl1 drosophila
Q9xs14 aulonocara
                                                                                                                                                                        Description
```

74444 86000000000000000000000000000000000	117 118 119 120 120 120 120 120 120 120 120 120 120
70.5 70.5 70.5 70.5 70.5 70.5 70.5 70.5	73 73 72.5 72.5 72.5 72.5
100.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8 110.8	0
381 381 321 323 323 411 1094 1131 495 815 815 336 336 336 336 336 329 802 2752 812 2752	256 814 929 134 557 561 465
12111000000000000000000000000000000000	
Q19458 Q958D4 Q958H4 Q958G3 Q958G3 Q958G3 Q958G3 Q958G3 Q87T43 Q87T43 Q87T43 Q87T43 Q87T43 Q87T43 Q87T43 Q97T44 Q97T44 Q97T44 Q97T44 Q97T44 Q97T44	Q9Z7L3 Q9Y5C7 Q9Y5G1 P79028 Q17948 Q17948 Q903Q1 Q9GN58 Q9GNU4
019ā58 caenorhabdi 09sbd4 arabidopsis 004258 arabidopsis 09swh4 arabidopsis 09swh4 arabidopsis 09skg3 arabidopsis 09skg3 arabidopsis 09skg3 arabidopsis 08sb3 arabidopsis 08yt43 anabaena sp 08rwt1 arabidopsis 09fz65 arabidopsis 053855 mycobacter1 09szq0 arabidopsis 042836 sordaria ma 09uq37 homo sapien 051038 homo sapien 060382 homo sapien 09uq35 homo sapien 09uq35 homo sapien 09uq35 homo sapien 09uq35 homo sapien	Q9z713 chlamydia p Q9y5c7 homo sapien Q9y5c1 homo sapien p79028 emericella Q17948 caenorhabdi Q9u3q1 caenorhabdi Q9u3q1 caenorhabdi Q9gn58 drosophila Q9ys19 rotavirus a

ALIGNMENTS

```
RESULT 1
Q8TAU6
RESULT 2
Q95J46
ID Q95J
AC Q95J
DT 01-D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOR RACE OCCUPANT OCC
                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 112;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8TAU6 PRELIMINARY;
Q8TAU6;
Q1-JUN-2002 (TrEMBLrel. 21, C.
Q1-JUN-2002 (TrEMBLrel. 21, L.
Q1-JUN-2002 (TrEMBLrel. 21, L.
Similar to urotensin 2.
Q95J46;
Q95J46;
01-DEC-2001
01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Strausberg R.;
submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; BC025776; AAH25776.1; -
EMBL; BC025776; AAH25776.1; -
SEQUENCE 139 AA; 16276 MW; 32DC529936D5BDB6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                     61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR 113
                                                                                                                                                                                                                                                                                                                                                                                                                                           GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKQ 113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
(TremBLrel. 19, (TremBLrel. 19,
                                                                                                             PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         88.1%; Score 577; DB 4; Length 139; 99.1%; Pred. No. 1.1e-52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Created)
   Created)
Last sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΑA
                                                                                                                     AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
```

Search completed: March 10, 2003, 17:39:19
Job time: 9.03784 secs

Page 10

```
STATE THE TEST OF 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
RATE RATE OF THE PROPERTY OF T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 15
COAA_BACSU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Db.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Sir
Matches 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-slb.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (OCT-1998) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gluconate utilization;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TIGRFAMS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF102543; AAD19407.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -1- SIMILARITY: BELONGS TO THE GNTP FAMILY OF PERMEASES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TRANSMEM
                                                            Mlzuno M., Masuda
                                                                                                                                                                                                                      STRAIN=168 / JH642;
MEDLINE=97124195; Pu
                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=1423;
                                                                                                                                                                                                                                                                                                                                                                                                   Bacterla; Firmlcutes;
                                                                                                                                                                                                                                                                                                                                                                                                                           Bacillus subtlils
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-1996 (Rel. 34, Created)
16-0CT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Pantothenate kinase (EC 2.7.1.33) (Pantothenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P54556;
01-OCT-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COAA_BACSU
                              Mlcroblology 142:3103-3111(1996)
                                                                                                                                                             Kobayashi
                                                                                                                                  "Systematic sequencing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  247 VFSSGANIFLPHGNNIRAFMNFMG-DPVVSLLIALLVSMVTLGFWRGFSSADLLKFTNDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70 KADSSTNIFNPRG-NLRKFQDFSGQDP--NILLSHLLARI----WKPYKKRE----TPDC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 LFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PATHWAY: Gluconate utllization.
SUBCELLULAR LOCATION: Integral membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LYGNWITPRIQLPAHNPFAESLEGSS-DQDKNLPGFWLTIFSIL--LPV------LLM 246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PF02447;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Simllarlty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kang H.S.
                                                                                                                                                                                                                                                                                                      FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TIGR00791; gntP; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IPR003474; GntP_permease.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        / ZM4 / CP4;
                                                                                                                                                                                              s.,
                                                                                                                                                                                                                                   PubMed=8969508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24
82
128
160
200
249
249
326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   47560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sugar
                                                                                                                                                                                                                                                                                                                                                                                                       Baclllales; Bacillaceae;
                                                                                                                                                                                                 Takemaru K.-I.,
                                                                                                                                  of the 283 kb 210 degrees-232 degrees region of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 68.5;
pred. No. 13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              transport;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
877BF46B0AF66522 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            319
                                                                                                                                                                                                     Hosono S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transport;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            protein (Potential).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42;
                                                                                                                                                                                                                                                                                                                                                                                                          Bacillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           acid kinase).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 451;
                                                                                                                                                                                                        Sato T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transmembrane
                                                                                                                                                                                                           Takeuchi M.,
                                                                                                              many
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8
```

```
RA Joris B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C.,
RA Kobayashi Y., Koetter P., Koningstein G., Krogh S., Kumano M.,
RA Kurita K., Lapidus A., Lardinois S., Lauber J., Lazarevic V.,
RA Lee S.M., Levine A., Llu H., Masuda S., Mauel C., Medigue C.,
RA Medina N., Mellado R.P., Mizuno M., Moestl D., Nakal S., Noback M.,
RA Noone D., O'Reilly M., Ogawa K., Oglwara A., Oudega B., Park S.H.,
RA Presecan E., Pujic P., Purnelle B., Rapoport G., Rey M., Reynolds S.,
RA Rieger M., Rivolta C., Rocha E., Roche B., Rose M., Sadaie Y.,
RA Sato T., Scanlan E., Schleich S., Schroeter R., Scoffone F.,
RA Sekiguchi J., Sekowska A., Seror S.J., Serror P., Shin B.S., Soldo B.,
RA Takeuchi M., Tamakoshi A., Tanaka T., Terpstra P., Tognoni A.,
RA Tosato V., Uchiyama S., Vandenbot M., Vannier F., Vassarottl A.,
RA Viari A., Wambutt R., Wedler E., Wedler H., Weltzenegger T.,
RA Winters P., Wipat A., Yamamoto H., Yamane K., Yasumoto K., Yata K.,
Yoshida K., Yoshikawa H.F., Zumsteln E., Yoshikawa H., Danchin A.;
The complete genome sequence of the Gram-positive bacterium Bacillus
                                                                                                                Db
  밁
                                                   20
                                                                                                                                                                8
                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Borriss R., Bourster L., Brans A., Braun M., Brignell S.C., Bron S., Brouillet S., Bruschi C.V., Caldwell B., Capuano V., Carter N.M., Choi S.K., Codani J.J., Connerton I.F., Cummings N.J., Daniel R.A., Denizot F., Devine K.M., Dusterhoft A., Ehrlich S.D., Emmerson P.T., Entlan K.D., Errington J., Fabret C., Ferrari E., Foulger D., Entlan K.D., Errington J., Fabret C., Ferrari E., Foulger D., Erritz C., Fujita M., Fujita Y., Fuma S., Galizzl A., Galleron N., Ghim S.Y., Glaser P., Goffeau A., Golightly E.J., Grandi G., Guy B.J., Haga K., Halech J., Harwood C.R., Henaut A., Hilbert H., Holsappel S., Hosono S., Hullo M.F., Itaya M., Klein C., Jorish B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Karamata D., Kasahara Y., Klaerr-Blanchard M., Klein C., Victoria B., Kasahara Y., Klaerr-B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kunst F., Ogasawara N., Moszer I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=98044033;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; D84432; BAA12625.1; ALT_INIT.
EMBL; Z99116; CAB14308.1; ALT_INIT.
Subtilist; BG11748; coak.
InterPro; IPR001324; PRK.
InterPro; IPR004566; PanK_bact.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -i- CATALYTIC ACTIVITY: ATP + pantothenate - ADP + D-4'-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nature 390:249-256(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatlcs Institute. The European Bioinformatlcs Institutions as longues by non-profit lnstitutions as longues.
                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                             TIGRFAMS; TIGR00554; panK_bact; 1.
Transferase; Kinase; ATP-blnding; Coenzyme A blosynthesls;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00485; PRK; 1.
                                                                                                                                                                                                                                                                                                                                                                                                 Complete proteome.
                                                                                                                196
                                                         60
                                                                                                                                                                                                                                                            Local
                                                                                                                                                                         9
                                                                                                                                                                      LLFIGFLNPLLSLPLLDSRE------ISFQLSAPHEDARLTPEELERASLLQILPEM
                                                                                                                IVIIEGINVLQSPTLEDDRENPRIFVSDFFDFSIYVDAEESRIFTWYLERFRLLR----
                                                   LGAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNTLLSHLLARIWK 108
                                                                                                                                                                                                                             l Similarity
27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bertero M.G., Bessleres P., Bolotin A., Borchert
                                                                                                                                                                                                                                                                                                                                             319 AA;
                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed-9384377;
---ETAFQNPDSYFHKFKDLSDQEAD----EMAASIWE 281
                                                                                                                                                                                                                                                                                                                                                   36639 MW;
                                                                                                                                                                                                                                                            10.4%;
                                                                                                                                                                                                                                   Score 68; DB Pred. No. 9.9; L3; Mlsmatches
                                                                                                                                                                                                                                                                                                                                                ATP (POTENTIAL).
; B6AB64B61D778A94 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ., Albertini A.M., Alloni G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        There are no rest
ng as lts content
                                                                                                                                                                                                                                                                                            1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Usage by and
                                                                                                                                                                                                                                        37;
                                                                                                                                                                                                                                                                                         Length 319;
                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           L G.,
, Henaut A.,
Tones L.,
                                                                                                                                                                                                                                           32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      for commercial
                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                     59
```

ω

```
RESULT 12
NCAP_RINDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Šõ
                                           DЬ
                                                                                        DЬ
                                                                                                                                                                                   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SO
FT
B
                    δÃ
                                                                οy
                                                                                                            8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                     Matches
                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
DISULFID
DISULFID
DISULFID
DISULFID
CARBOHYD
                                                                                                                                                                                                                                                            the nucleocapsid protein.";
Virus Genes 5:5-15(1991).
-!- FUNCTION: MOST ABUNDANT PROTEIN IN THE VIRION
                                                                                                                                                                                                                                                                                                                                                                            Rinderpest virus (strain L) (RDV).
Viruses; ssRNA negative-strand viruses; Mononega
Paramyxoviridae; Paramyxovirinae; Morbillivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCAP_RINDL
P37708;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                ELEMENT CONFERRING HELICAL SYMMETRY ON THE NUCLEOPROTEIN CORE AS WELL AS INTERACTING WITH PROTEIN DURING VIRION FORMATION.

-!- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES NUCLEOCAPSID FAMILY.
InterPro; IPR002021; Paramyx_ncap.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                           Nucleocapsid
                                                                                                                                                                                                   Pfam; PF00973; Paramyx_ncap; 1.
                                                                                                                                                                                                                                                                                                            Kamata H., Tsukiyama
Yamanouchi K.;
                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE=91205763; PubMed=2017875;
                                                                                                                                                                                                                                                                                                                                                                                                                              Nucleocapsid
168
                      100
                                           108
                                                                                                                                                                                                                                                                                               Nucleotide sequence of cDNA to the rinderpest virus mRNA encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              268
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      149
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 62
                                                                   59
                                                                                        50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              22
                                                                                                                                               Local
                                                                                                              ω
                                                                                                            KLASCCLLFIGFLNPLLSLPLLDSREIS----FQLSAPHEDARLTPEELERASLLQILPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HGPQNKQPFMVAFFK 282
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WKPYKKRETPDCFWK 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRYHHREFRFDLSKIPEGEAVTAAEFRIYKDYIRERFDNETFRISVYQVLQEHLGRESDL 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PLLDSREISFQLSAPHEDARLTPEELE------RASLLQILPEMLG-----
ATILAQIWILLAKAVTTPD
                     SHLLARIWKPYKKR-ETPD
                                         DKTQSGLTFASRGASMDDEADRYFTYDEPNGGEERQSYWFENREIQDIEVQDPEGFNMIL
                                                               -----MLGAERGDIL-RKADSSTNIFNPRG-----NLRKFQDFSGQDP---NILL 99
                                                                                      RLLDCLVKMVG--DPDISGPKLTGALISILSLEVESPGQLIQRITDDPDISIKLVEVIQS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   34;
                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -----AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPNILLSHLLARI 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                293
330
359
363
395
187
187
302
321
372
431 AA;
                                                                                                                                                                                525 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                      (Rel. 30, Created)
(Rel. 30, Last sequence (Rel. 30, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                            protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             431
428
428
430
395
187
187
302
372
                                                                                                                                                                                58131 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                49313
                                                                                                                                                                                                                                                                                                                      ~ <del>~</del> . ,
                                                                                                                                              10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
186
                                                                                                                                                                                                                                                                                                                       Sugiyama M., Kamata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15;
                                                                                                                                    20;
                                                                                                                                              Score 69;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 69;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
N-LINKED (GLCNAC...)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BONE MORPHOGENETIC PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                               582E8ECA2AACA71F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47A05E45C6815F8A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    525
                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
11;
                                                                                                                                                                                                                                                                                                                                                                                          Mononegavirales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA.
                                                                                                                                                                                                                                                                                                                      Υ.,
                                                                                                                                  56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50;
                                                                                                                                                         Length 525;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 431;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .) (POTENTIAL)
                                                                                                                                                                                                                                                                                                                       Yoshikawa
                                                                                                                                                                                                                                                              AND AN IMPORTANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36;
                                                                                                                                  26;
                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                            58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                  7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5;
```

```
DGIA_DEIRA
ID DGIA_DE
AC Q9RWAI
DT 15-JUN
DT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δÃ
       OC GREDINA
                                                                                                                                                                                                                                                                                                                                                                 RESULT 14
GNTP_ZYMMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                              30-MAY-2000
30-MAY-2000
15-JUN-2002
Zymomonas
Bacteria;
Zymomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             White O., Eisen J.A., Heidelberg J.F., Hickey E.K., Peterson J.D., Dodson R.J., Haft D.H., Gwinn M.L., Nelson W.C., Richardson D.L., Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M., Vamathevan J.J., Lam P., McDonald L., Utterback T., Zalewski C., Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmahn R.D., Ketchum K.A., Nelson K.E., Salzberg S., Smith H.O., Venter J.C.,
                                                                                                               GNTP.
                                                                                                                                                                                                                                                                                          GNTP_2YMMO
Q92670;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SMART; SM00471; HDc; 1.

Hypothetical protein; Hydrolase; Complete proteome SEQUENCE 373 AA; 41372 MW; 21D0A09B9EBC6571 CR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           modified and this statement is not removed. entities requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entre European Bioinformatics Institute. There are no restitute the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-JUN-2002 (Rel. 41, Created)
15-JUN-2002 (Rel. 41, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation updat
Deoxyguanosinetriphosphate triphosphohydrol
                                                                                                                                             Gluconate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR003607; Pfam; PF01966; HD; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; AE001952; AAF10581.1; -. TIGR; DR1006; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Science 286:1571-1577(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9RVM1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DG1A_DEIRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    radiodurans R1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Genome sequence of the radioresistant bacterium Deinococcus radiodurans R1.":
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fraser C.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=20036896; PubMed=10567266;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deinococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Thermus/Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Deinococcus radiodurans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AD---STNIFNP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLLHPEDLLELPLW--REL-----QERSGVTSQRPSSADLRTLQRELLGWLIGDLTRS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SDAAIAASGVASPDAVQAHAHRLVTYSPALRGHLRGAGDF---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  non-profit institutions as long
                                                                          mobilis.
                                 Proteobacteria; alpha subdivision; Sphingomonadaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IPR002819; HD
                                                                                                                                                                           (Rel. 39, Created)
(Rel. 39, Last seq
(Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10.5%;
27.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ME_Pplase_HDc.
                                                                                                                                                                              Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                annotation update)
triphosphohydrolase-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -----RGNLRKFQDFSGQDPNILLSHLLARIWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        group; Deinococci;
                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21D0A09B9EBC6571 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           No. 11;
                                                                                                                                                                                                                                                                                                                               451
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       373
                                                                                                                                                                              update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                               ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           here are no restrictions as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deinococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         уd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -LRERLYRHWQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              309
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         commercia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ŋ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     6
```

```
δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOTT TO BREEF TO BREE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ouery Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        _HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BMP7_HUMAN STANDARD; PRT; 431 AA.
P18075; O9NTO7; O9H512;
01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Bone morphogenetic protein 7 precursor (BMP-7) (Osteogenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                           "Identification of transforming growth factor beta present in bone inductive protein purified from bov
                                                                                                                                                                                       Celeste A.J., Iannazzi J.A., Wang E.A., Wozney J.M.;
                                                                                                                                                                                                                                                                                                                                                                                 Oezkaynak E., Rueger D.C., Sampath T.K., Oppermann H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Oxldoreductase; Tricarboxyllc acid cycle; NAD; Complete proteome ACT_SITE 160 160 PROTON-RELAY (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001252; Mdh.
InterPro; IPR001236; ldh.
Pfam; PF00056; ldh; l.
Pfam; PF02866; ldh_C; l.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AL389898; CAB97430.1; HSSP; P10584; 1BDM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nature 417:141-147(2002).
-!- CATALYTIC ACTIVITY: (S)-malate + NAD(+) - oxaloacetate
-!- SIMILARITY: BELONGS TO THE LDH FAMILY. MDH SUBFAMILY.
                                                                                                          Proc. Natl. Acad.
                                                                                                                                                                                                                                           MEDL1NE-91088608; PubMed-2263636;
                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-90291971; PubMed-2357959;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ProDom; PD003052; Mdh; 1. PROSITE; PS00068; MDH; 1.
                        MEDLINE=21638749; PubMed=11780052;
                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A., AND PARTIAL SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACT_SITE
                                                                                                                                                                                                                                                                                                                                                   "OP-1 cDNA encodes an osteogenic protein in the TGF-beta family.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20 SLPLLDSREISFOLSAPHEDARLTPEELERASLLOILPEMLGAERGDILRKADSSTNIFN 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         European Bloinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OR OP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POG--KAINDHAADDIKVLV 129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRGNLRKFODFSGODPNILL 99
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AFPLLOGIEIT-----DDPNVAFDGANVALLVGARPRTKGMERGDLL---EANGGIFK 111
                                                                                                                                                                                                                                                                                                                             9:2085-2093(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     188
329 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         163
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
Matthews L.H.,
                                                                                                        Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   163 S
188 P
: 34643 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10.7%;
27.5%;
                                                                                                          U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                       ., Drier E.A., Corbett C., Ridge R.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15;
Ashurst J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 70;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBSTRATE CARBOXYL GROUP (BY SIMILARITY). PROTON-RELAY (BY SIMILARITY).
                                                                                                                                                                                                                Taylor R.C.,
                                                                                                        tein purified from b 87:9843-9847(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   76E5F74769CCCAF4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 329
Burton J.,
                                                                                                                                                                                                                Hewick R.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             31;
                                                                                                                                bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
Gilbert J.G.R.,
                                                                                                                                                                                                             Rosen V.,
                                                                                                                                   bone
                                                                                                                                                            members
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                +
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NADH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ω
```

SIGNAL

POTENTIAL POTENTIAL 3D-structure. PROSITE; PS00250;

PRINTS; PR00438; GFCYSKNOT. ProDom; PD000357; TGFb; 1. SMART; SM00204; TGFB; 1.

pfam; PF00019; TGF-beta; 2.
Pfam; PF00688; TGFb_propeptide;

Genew;

HGNC:1074; BMP7

MIM;

112267;

InterPro;

IPR002400; GF_cysknot.
IPR001839; TGFb.
IPR001111; TGFb_N.

nterPro;

InterPro;

EMBL; AL122058; CAB90273.1; -. EMBL; AL157414; CAC08434.1; -.

; S10529; S10529. ; C39263; C39263. ; LBMP; 23-JUL-97.

Signal; Growth factor; Cytokine;

Bone; Cartilage; Glycoprotein;

TGF_BETA_1;

```
RA Jones M., Stavrides G., Almeida J.P., Babbage A.K., Bagguley C.L.,
RA Bailey J., Barlow K.F., Bates K.N., Beard L.M., Beare D.M.,
RA Beasley O.P., Bird C.P., Blakey S.E., Bridgeman A.M., Brown A.J.,
RA Buck D., Burrill W.D., Butler A.P., Carder C., Carter N.P.,
RA Clegg S., Cobley V.E., Collier R.E., Connor R.E., Corby N.R.,
Collson A., Coville G.J., Deadman R., Dhami P.D., Dunn M.,
RA Collson A., Coville G.J., Deadman R., French L., Garner P.,
RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Ellington A.G., Frankland J.A., Fraser A., French L., Garner P.,
RA Hammond S., Harley J.L., Heath P.D., Dun, D., Down M.,
Coville E., Hunt A.R., Hunt S.E., Jekosch K., Johnson C.M., Johnson D.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Kay M.P., Kimberley A.M., King A., Knights A., Laird G.K., Lawlor S.,
RA Marsh V.L., Martin S.L., McConnachie L.J., McLay K., McMurray A.A.,
RA Milne S.A., Mistry D., Moore M.J.F., Mullikin J.C., Nickerson T.,
RA Milmore B.J.C.T., Prathalingam S.R., Plumb R.W., Ramsay H.,
RA Rice C.M., Ross M.T., Scott C.E., Sehra H.K., Shownkeen R., Sims S.,
RA Swann R.M., Sycamore N., Taylor R., Free L., Thomas D.W., Thorpe A.,
RA Williams L., Wray P.W., Hubbard T., Durbin R.M., Bentley D.R., Beck S.,
RA Roders J.,
                                                                                                                                                                                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Entropean Bioinformatics Institute. There are no restructed by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Griffith D.L., Keck P.C., Sampath T.K., Rueger D.C., "Three-dimensional structure of recombinant human os 1: structural paradigm for the transforming growth f
                                                                                                                                                                                                                                                                                                                                                                    EMBL; X51801; CAA36100.1; -. EMBL; M60316; AAA36738.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      superfamily.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "The DNA sequence and com
Nature 414:865-871(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                              modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=96149402; PubMed=8570652;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rogers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     X-RAY CRYSTALLOGRAPHY (2.8 ANGSTROMS) OF 293-431.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C. Natl. Acad. Sci. U.S.A. 93:878-883(1996).
FUNCTION: INDUCES CARTILAGE AND BONE FORMATION. MAY BE THE OSTEOINBUCTIVE FACTOR RESPONSIBLE FOR THE PHENOMENON OF EPITHELIAL OSTEOGENESIS. PLAYS A ROLE IN CALCIUM REGULATIO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: BELONGS TO THE TGF-BETA FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          comparative analysis of human chromosome 20.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DISULFIDE-LINKED.
EXPRESSED IN THE KIDNEYS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND BLADDER. LOWER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C., Carlson W.D.; osteogenic prote
                                                                                                                                                                                                                                                                                                                                                                                                                                                                bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               factor beta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REGULATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                and for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ය
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                commercia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9
```

```
RA Durbin K.J. Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W., RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., RA Glodek A., Gong F., Gorrell J.H., Hernandez J.R., Houck J., RA Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Houck J., RA Harris N.L., Kalush F., Karpen G.H., Ke Z., Kennison J.A., Ketchum K.A., RA Hastin D., Houston K.A., Ci J., Li Z., Liang Y., Lin X., RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X., RA Lasko P., Lei Y., Levitsky A.A., Li J., Li Z., Liang Y., Lin X., RA Lasko P., Lei Y., McDarry C., Morris J., Moshrefi A., RA McIkulov G., Milshina N.V., Mobarry C., Morris J., Moshrefi A., RA McIkulov G., Milshina N.V., Mobarry C., Morris J., Nelson D.L., RA Merkulov G., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M., RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., RA Rainert K., Remington K., Saunders R.D.C., Scheeler F., Shen H., RA Spier E., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T., RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E., RA Spier E., Wassarman D.A., Weinstock G.M., Weissenbach J., Wang Z.-Y., Wassarman D.A., Weinstock G.M., Weissenbach J., RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A., RA Williams S.M., Woodage T., Worley K.C., Wu D., Yang S., Yao Q.A., RA Ye J., Yeh R., F., Zaveri J.S., Zhan M., Zhang G., Zhao Q., Zheng L., Zheng X.H., Zhong S., Rabin M., Zhang G., Zhao Q., Zheng L., Siapleton M., Strong G., Zhu X., Smith H.O., First Strong R., Rabin G.M., Venter E., Wang A., Smith H.O., First Strong R., Rabin G., M., Venter E., Panco Q., Zheng L., C., Catalty T., E., Rabin G., M., Venter E., Panco Q., Zheng L., C., Catalty T., E., Rabin G., M., Venter E., Panco Q., Zheng C., Le Pantwaye G., Phosose 6-phosphate.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            de Pablos B., Delcher A., Deng Z., Mays A.D., Dev I. Dietz S.M.,
Dodson K., Doup L.E., Downes M., Dugar-Rocha S., Dunkov B.C., Dunn P.,
Dodson K.J., Evangelista C.C., Ferraz C., Ferriera S., Fleischmann W.,
Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K.,
Harris N.L., Harvey D., Heiman T.J., Hernandez J.R., Harris M.,
Hostin D., Houston K.A., Howland T.J., Marchand J.R., Harvis N., Kalush F., Warner R.,
Kimmel "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M. Beesson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Sutton G.G., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Brandon R.G., Kogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G.
                                                                                                                                                                                                                                                    modified and this statement
                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                          -!- PATHWAY: FIRST STEP OF SEVERAL METABOLIC PATHWAYS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Amanatides P.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=20196006; PubMed=1073I132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Contrasting molecular population genetics of four hexokinases Drosophila melanogaster and Drosophila simulans.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophila
                                                                                                                                                                                                          send
                                                                                                                                                                                                                                                                                                                                                                              gene model prediction.
                                                                                                                                                                                                                                                                                                                                                                                                      CAUTION: Ref.3 sequence differs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3
                                                                              AF257593;
AF257594;
                                                                                                                       AF257591;
AF257592;
                                                                                                                                                                   AF257590;
                                       AF257596;
                                                             AF257595;
                                                                                                                                                                                                             an
                                                                                                                                                                                                                                  requires
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (APR-2000)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (JAN-2000)
                                                                                                                                                                                                             email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .
D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Celniker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 z
                                  AAG22891.1;
AAG22893.1;
AAG22895.1;
AAG22897.1;
AAG22897.1;
AAG22897.1;
AAG22901.1;
AAG22903.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kulkarni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 iker S.E., Holt R.A., E
Scherer S.E., Li P.W.,
                                                                                                                                                                                                                                D
                                                                                                                                                                                                                                  license
                                                                                                                                                                                                                                                                       institutions as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ţ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               G.V., Deobagkar D.N.;
the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                    is not removed. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R.A., Evans C.A., Goca
                                                                                                                                                                                                                                                                                                                                                                                                    from that
                                                                                                                                                                                                                                (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                         There are no restrictions
                                                                                                                                                                                                                                                                       its content
                                                                                                                                                                                                                                                                                                                                                                                                      shown due
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gocayne
                                                                                                                                                                                                                                                    γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ayne J.
Galle
                                                                                                                                                                                                                                                      and
                                                                                                                                                                                                                                                                                                                                                                                                      to erroneous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Reese M.G.,
                                                                                                                                                                                                                                                                                                                   a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R.F.
                                                                                                                                                                                                                                                    for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                G.L.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       E.M.,
                                                                                                                                                                                                                                                      n no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    H.O.,
                                                                                                                                                                                                                                                                                               on
S
```

```
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDH_STRCO STANDARD Q9K3J3; Q9K3J3; 16-OCT-2001 (Rel. 40, Clic-CT-2001 (Rel. 41, LI5-JUN-2002 (Rel. 41, L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRCO
                                                        Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challis G.L., Thomson N.R., James K.D., Harris D.E., Quall M.A., Kieser H., Harris D.E., Quall M.A., Kieser H., Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Collins M., Cronin A.; Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S., Huang C.-H., Kieser T., Larke L., Murphy L., Oliver K., O'Neil S., Rabbinowitsch E., Rajandream M.A., Rutherford K., Rutter S., Seeger K., Saunders D., Sharp S., Squares R., Squares S., Taylor K. Warren T., Wietzorrek A., Woodward J., Barrell B.G., Parkhill J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL;
HSSP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                      I5-JUN-2002 (Rel. 41, Last annotation Malate dehydrogenase (EC 1.1.I.37). MDH OR SCO4827 OR SC2A6.I2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam; PF00349; hexokinase; i Pfam; PF03727; hexokinase2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         HSSP; Q26609; IBDG.
FlyBase; FBgn0042711; Hex-tl
                                                                                                                                                                                                                                          STRAIN=A3(2) / M145;
MEDLINE=21996410; PubMed=12000953;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR00475; HEXOKINASE. ProDom; PD001109; Hexokinase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL;
                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                  Actinomycetales; NCBI_TaxID=1902;
                                                                                                                                                                                                                                                                                                                                                                                Bacteria; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                  Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Multigene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Transferase; Kinase; Glycolysis; ATP-binding;
"Complete genome coelicolor A3(2)
                                             Hopwood D.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61 GAERGDILRKADSSTNIFNPRGNLRKF---QDFSGQDPNILLSHLLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66 GRERGQFLALEMMPTNC---RIMLVKFSSERDIYTSSKCVIMPHTVA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14 VYKV---CKLFNPSIDDLEKIKNAMDREITMGLSRDHHDRSTVPCHL---SYVQDLP--T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       L; AF257599; AAG22909.I; ...
L; AF257600; AAG22911.I; ...
L; AF257601; AAG22913.I; ...
L; AF257602; AAG22915.I; ...
L; AF257604; AAG22917.I; ...
L; AF257604; AAG22919.I; ...
L; AF257605; AAG22921.I; ...
L; AF257606; AAG22923.I; ...
L; AF257608; AAG22925.I; ...
L; AF257608; AAG22925.I; ...
L; AF257608; AAG22927.I; ...
L; AAG27968; AAG22927.I; AAG22927.I; AAG22927.I; AAG22927.I; AAG22927.I; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AE003756;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
ω,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                         FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IPR001312; Hexokinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                family; Polymorphism
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             465 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                    coelicolor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAF56591.I;
    sequence of the model actinomycete Streptomyces. ^{"}:
                                                                                                                                                                                                                                                                                                                                                         Streptomycineae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        243
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             52260 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IO.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Last sequence
                                                                                                                                                                                                                                                                                                                                                                              Actinobacteria (class); Actinobacteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALT_SEQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 71;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DPF96E3_4.2, DPF96E3_23.1, DPF96E3_74.2, VT97E3_41, SC96E3_12.3, HFL97E3_B, HFL97E3_12, HFL97E3_15, ZIM(S)E3_24, ZIM(S)E3_35).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GLUCOSE-BINDING (PC
N -> H (IN STRAINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIM(S)E3_24).
Y -> F (IN STRAINS DPF96E3_3.0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATP (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IM(S)E3_35).
67B6I1920D56B6DD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                         Streptomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             329
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB
7.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ı,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (POTENTIAL).
INS HFL97E3_12 AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 465
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   104
                                                                                                                                                                                                                                                                                                                                                     Streptomyces
                                                                                      Taylor K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                   s:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

```
DAG DAG DOOR
                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                             Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               $\text{Solution \text{Solution \text
                                                                                                                                                                                                                                                                      IOD3_XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00628; PHD; 3.
Pfam; PF00656; SET; 1.
SMART; SM00542; FYRC; 1.
SMART; SM00249; PHD; 4.
SMART; SM00249; PHD; 4.
SMART; SM00508; POSTSET; 1.
SMART; SM00317; SET; 1.
                                                                                         01-OCT-1996 (Rel. 34, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Type III iodothyronine deiodinase (EC 3.8.1.4) (Ty
5'deiodinase) (DIOIII) (Type 3 DI) (5DIII) (XL-15)
DIO3 OR TXDI3 OR ITDI3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
VARSPLIC
CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZN_FING
ZN_FING
ZN_FING
ZN_FING
DOMAIN
        Xenopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordața; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROSITE; PS01359; ZF_PHD_1; 4.
PROSITE; PS50016; ZF_PHD_2; 3.
Transcription regulation; Zinc-finger; Metal-binding; DNA-binding;
NCBI_TaxID=8355
                                                                                                                                                                                                        01-OCT-1996 (Rel. 34,
                                                                                                                                                                                                                                IOD3_XENLA
P49899;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nuclear protein; Developmental protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR001214; SET.
InterPro; IPR001965; Znf_PHD.
InterPro; IPR001841; Znf_ring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZN_FING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alternative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR003889; Fyrich_C.
InterPro; IPR003888; Fyrich_N.
InterPro; IPR003616; PostSET.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FlyBase; FB9n0003862;
                                                                                                                                                                                                                                                                                                                                                                                                                                             857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TRANSFAC;
                                                                                                                                                                                                                                                                                                                                                       903 TASSSSPSVVASTSVK--WK 920
                                                                                                                                                                                                                                                                                              8
                                                                                                                                                                                                                                                                                                                                                                                                  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKFQ 88
                                                                                                                                                                                                                                                                                                                                                                                                DFSGQDPNILLSHLLARIWK 108
                                                                                                                                                                                                                                                                                                                                                                                                                                           ISFQLPAAH---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              splicing.
1346 134
1348 139
1441 148
1734 179
1794 18
1794 18
1795 55
565 5
565 5
661 (
905
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
1576 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PS50280;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2341
2392
3726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1A6Y
                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        516
570
664
910
1582
3027
3040
3184
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1844
                                                                                                                                                                                                                                                                                                                                                                                                                                       -----RSRLSAILPPGM---RGEAAAREEKSAELLSPTGSLRFTS 902
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           400575
                                                                                                                                                                                                      Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R -> S (IN REF. 1).
G -> S (IN REF. 1).
MW; D2756E50763D1CF5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GLN-RICH.
POLY-SER.
POLY-GLN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PHD-TYPE 1.
PHD-TYPE 2.
PHD-TYPE 3.
PHD-TYPE 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 79;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MISSING (IN SHORT ISOFORM).
P -> PWLTSPLKFLGLSTHGGLLLWLLLLGVVVRLKQGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PHD-TYPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POLY-GLN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POLY-GLU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POLY-SER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       POLY-SER
                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                 271 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (ATYPICAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 3726;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Activator;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28;
                                                                                                                                      (Type-III
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

```
RRC OCC OCC DTT
                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                             g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HXK1_DROME
                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                        맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RR RR RR RR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                  Drosophila meianogaster (Fruit fly).

Bukaryota; Metazoa; Arthropoda; Mandibulata; Pancrustacea; Hexapoda;
Insecta; Pterygota; Neoptera; Endopterygota; Diptera; Brachycera;
Muscomorpha; Ephydroidea; Drosophilidae; Drosophila.

NCBI_TaxID=7227;
                                                                                                                                                        HXK1_DROME STANDARD; PRT; 465 AA Q9NFT9; Q9VBF1; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) Hexokinase type 1 (EC 2.7.1.1). HEX-T1 OR HEX OR CG5443.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
 Duvernell D.D.,
                STRAIN=Various strains;
                                   SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Oxidoreductase; Hydroiase; SE_CYS 132 132 132 MUTAGEN 132 132 132 SEQUENCE 271 AA; 30252 M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro; IPR000643; T4_deiodinase.
Pfam; PF00837; T4_deiodinase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; L28111; AAA49971.2; ALT_SEQ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- CATALYTIC ACTIVITY: L-thyroxine + AH(2) = 3,5,3'-L-triiodo-L-thyronine + iodide + A + H(+).
-!- COFACTOR: SELENOCYSTEINE. THE ACTIVE-SITE SELENOCYSTEINE IS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Brown D.D., Galton V.A Proc. Nati. Acad. Sci.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Brown D.D., Gaiton V.A.;
"A thyroid hormone-regulated gene in Xenopus laevis encodes a type
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          St Germain D.L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=95062251; PubMed=7972049;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Proc. Natl. Acad. Sci. U.S.A. 91:7767-7771(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    St Germain D.L., Schwartzman R.A., Croteau W., Kanamori A., Wang Z.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=94329597; PubMed=8052658;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ERRATUM
                                                                                                                                                                                                                                                                                                                                                             72 TVESLRAVWHGQKLDYFKSAHLGCSAPNTEVVMLEGRRLCKILDFSQGKRPLVV 125
                                                                                                                                                                                                                                                                                                                                                                                                    52 LLQILPEMLGAERGDILRKAD-----SSTNIFNPRG-NLRKFQDFS-GQDPNIL
                                                                                                                                                                                                                                                                                                                                                                                                                                             15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3 KLASCCLLFIGFLNPLLSLPLLD------SREISFQLSAPHEDARLTPEELERAS 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ENCODED BY THE OPAL CODON, UGA. SIMILARITY: BELONGS TO THE IODOTHYRONINE DEIODINASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TETRAJODOTHYRONINE) INTO T3 (3,5,3'-TRIIODOTHYRONINE) AND OF T3 INTO T2 (3,3'-DIIODOTHYRONINE). MAY PROTECTIVE ROLE IN SELECTED TISSUES BY PREVENTING THEIR EXPOSURE TO INAPPROPRIATELY TIMED OR EXCESSIVE LEVELS OF THYROID HORMONE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C. Nati. Acad. Sci. U.S.A. 91:11282-11282(1994).
FUNCTION: RESPONSIBLE FOR THE DEIODINATION OF T4 (3,5,3',5'-
                                                                                                                                                                                                                                                                                                                                                                                                                                        QVAACCLLLPRFLLTGLMLWLLDFQCIRRRVLLTAREES---TAEHEDPPLCVSDSNRMC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                l Similarity
33; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PS01205;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
Eanes W.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schwartzman R.A., Croteau W., Kanamori A., Wang Z.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                T4_DEIODINASE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      V.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30252 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10.9%;
28.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Selenium; Selenocysteine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 71.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C->L: LOSS OF ENZYME ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     64CFA26D9E9B511D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 271;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                          71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

```
RESULT 6
UR2G_CYPCA
                                                                                                                                                                                                                                                                                                                                                                             A ACCORDED TO THE TERM OF THE 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Вþ
                                                                                           ф
                                                                                                                                     Q
                                                                                                                                                                                       Вþ
                                                                                                                                                                                                                                δÃ
В
                                           Q
                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Actinopterygii; Neopterygii; Teleostei; Cyprinidae; Cyprinus. NCBI_TaxID=7962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1988 (Rel. 06, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation.update)
UII gamma precursor [Contains: Urophysin gamm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ohsako S., Ishida I., Ichikawa T. "Cloning and sequence analysis o. urotensin II-alpha and gamma."; J. Neurosci. 6:2730-2735(1986).
                                                                                                                                                                                                                                                                                                                                                                             DISULFID SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removentities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (In) Rich D.H., Gross E. (eds:);
Proceedings of the 7th american peptide symposium,
Pierce Chemical Co., Rockford Il. (1981).

-i- FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 114-125.
Munekata E., Ohtaki T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE-86307061; PubMed-2427672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cyprinus carpio (Common carp).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      111
                                                                                                                                                                                                                                                                                                                                                                                                                           PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; M14088; AAA49216.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       [nterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
  106
                                                                                              63
                                                                                                                                         61
                                                                                                                                                                                                                                   4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CORTICOTROPIN-RELEASING FACTOR. THE NONHORMONAL PORTION OF PRECURSOR MAY BE A UROTENSIN BINDING PROTEIN, UROPHYSIN. SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                          σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rce Chemical Co., Rockford Il. (1981).
FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY
SYSTEM. IT HAS A SUGGESTED ROLE IN OSMOREGULATION AND AS A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WGSRRQFRKRGGGADCFWKYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SWISS-PROT entry is copyright. It is produced through a collak
een the Swiss Institute of Bioinformatics and the EMBL outst
European Bioinformatics Institute. There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAVVEYSPLL - - - - SRENIKVP -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CYPCA
                                                                                                                                                                                                             GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPY-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PF02083;
                                                                                                                                                                                                                                                                                   l Similarity
36; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cleavage
1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PS00984; UROTENSIN_II; 1.
Cleavage on pair of basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         non-profit institutions as long as and this statement is not removed. \ensuremath{\mathsf{U}}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR001483; Urotensin_II.
                                             KKRETPDCFWKYCV
                                                                                                                                                                                                                                                                                                                                                                             22
114
119
125 i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -KKRETPDCFWKYCV
                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Urotensin_II;
                                                                                                                                                                                                                                                                                                                                                                               ΑA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                              SQENIKVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      06, Created)
                                                                                                                                                                                                                                                                                                                                                                                                       106
125
124
                                                                                                                                                                                                                                                                                                                                                                               13866 MW;
                                                                                                                                                                                                                                                                                                           13.4%;
25.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ichikawa T.,
                                                124
    125
                                                                                                                                                                                                                                                                                      19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                         Score 87.5;
Pred. No. 0.
                                                                                                                                                                                                                                                                                                                                                                                                                             UROPHYSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of
                                                                                                                                                                                                                                                                                                                                                                                  E1587DCFC8CB674D CRC64;
                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CDNAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   residues;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      --GQIPKEALRELL--LEKPYRLIPPSGL I03
                                                                                                GQIPKEALRELL - - LEKPYRLIPPRGLWG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           McMaster
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      125
                                                                                                                                                                                                                                                                                                                                                                                                                                II-GAMMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAMMA (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vertebrata; Euteleostomi;
Ostariophysi; Cypriniform
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gamma; Urotensin II-gamma].
                                                                                                                                                                                                                                                                                                              .03;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T.;
                                                                                                                                                                                                                                                                                                                                 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              signal.
                                                                                                                                                                                                                                                                                      46;
                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ū.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            precursors
                                                                                                                                                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lederis
                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          pp.69-72,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ~
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a collaboration
                                                                                                                                                                                                                                                                                        39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              for
                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                            62
                                                                                                                                                                                                                                          60
    TRESULT 7
TREAL TRAINED TRAINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DROME
                          EMBL; M31617;
EMBL; Z50152;
EMBL; Z50152;
EMBL; Z31725;
EMBL; Z31725;
                                                                                                                                                                                                                                                                     the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ----
                                                                                                                                                                                                                                                                                                                                                                                                                                                          -
       A35085;
```

```
P20659; Q27255; Q27327;
01-FEB-1991 (Rel. 17, Created)
16-CCT-2001 (Rel. 40, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mazo A.M., Huang D.-H., Mozer B.A., Dawid I.B.;
"The trithorax gene, a trans-acting regulator of the bithorax complex in Drosophila, encodes a protein with zinc-binding domains.";
Proc. Natl. Acad. Sci. U.S.A. 87:2112-2116(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Arthropoda; Mandibulata;
Insecta; Pteryyota; Neoptera; Endopteryyota;
Muscomorpha; Ephydroidea; Drosophilidae; Dros
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sedkov Y., Tillib S., Mizrokhi L., Mazo A.;
"The bithorax complex is regulated by trithorax earlier during Drosophila embryogenesis than is the Antennapedia complex, correction abithorax-like expression pattern of distinct early trither."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. MEDLINE=90192757;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Muscomorpha; Ephydroidea; NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TRX_DROME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=96100387; PubMed=8555104; Tillib S., Sedkov Y., Mizrokhi L., Mazo A.; "Conservation of structure and expression of the trithorax gene between Drosophila virilis and Drosophila melanogaster."; Mech. Dev. 53:113-122(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Drosophila
                                                                                                                                           use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kuzin B., Tillib S., Sedkov Y., Mizrokł
"The Drosophila trithorax gene encodes
directly regulates the region-specific
Genes Dev. 8:2478-2490(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CHARACTERIZATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=Oregon-R;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Development 120:1907-1917(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A., MEDLINE=95009521; P
                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=95047388;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         transcripts
                                                                                                                                                                                                                                                                  between
                                                                                                                                                                                                                                ween the Swiss Institute of Bioinformatics
European Bioinformatics Institute. There a
                                                                                                                                                                                                                                                                                                                             SIMILARITY: BELONGS TO THE TRANSCRIPTION FACTOR SIMILARITY: CONTAINS 1 SET DOWAIN.
SIMILARITY: CONTAINS 5 PHO-TYPE ZINC FINGERS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SUBCELLULAR LOCATION: Nuclear.
ALTERNATIVE PRODUCTS: 2 ISOFORMS;
SHORT FORM; ARE PRODUCED BY ALTERN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FUNCTION: FUNCTIONS IN SEGMENT DETERMINATION THROUGH INTERACTION WITH GENES OF BITHORAX (BX-C) AND ANTENNAPEDIA (ANT-X) COMPLEXES IT CAN BEHAVE AS AN ACTIVATOR OF BX-C.
                                                                                                                                                                                                                                                                                                                                                                                                                                   MISCELLANEOUS: THIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         melanogaster (Fruit fly)
AAA29025.1; -. CAA90514.1; -. CAA90513.1; -. CAA83516.1; -. CAA83515.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                N.A.
                                                                                               AAA29025.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PubMed=7924996;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PubMed=7958911;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PubMed=2107543;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ALTERNATIVE SPLICING,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sedkov Y., Mizrokhi L., Mazo A. horax gene encodes a chromosomal he region-specific homeotic gene
                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN HAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                   ALTERNATIVE SPLICING. HAS BEEN EXPERIMENTALLY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3726
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A LONG
                                                                                                                                                                                                                                          There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ota; Diptera;
Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND
                                                                                                                                                                                                                 as
                                                                                                                                                                     http://www.isb-sib.ch/announce,
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SPLICING.
                                                                                                                                                                                              Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pancrustacea; Hexapoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CHARACTERIZATION
                                                                                                                                                                                                                    its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            gene
                                                                                                                                                                                                Ьy
                                                                                                                                                                                                                                                                                                                                                                                          TRITHORAX FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein and
fork head.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Brachycera;
                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                        NMOHS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HERE)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        correlating
                                                                                                                                                                                                                                                                       a collaboration -
                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                        ТО
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND
                                                                                                                                                                                                in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                        BIND
                                                                                                                                                                                                                                               on
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UR2_RANRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                     Query Match
Best Local S
Matches 42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              믕
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               рЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
                                                                                              DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long as its content modified and this statement is not removed. Usage by ar
                                                                                                                                                                                                                                                                                                                                                                                                                              tetrapod, the frog Rana ridlbunda.";
Biochem. Biophys, Res. Commun. 188:578-583(1992).
-I- FUNCTION: INVOLVED IN SMOOTH MUSCLE STIMULATING MOBILIZING ACTIVITIES. IT HAS A SUGGESTED ROLE A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coulouarn Y., Lihrmann I., Jogou S., Anouar Y., Tostivint H., Beauvillain J.C., Conlon J.M., Bern H.A., Vaudry H.; "Cloning of the cDNA encoding the urotensin II precursor in f human reveals intense expression of the urotensin II gene in motoneurons of the spinal cord."; proc. Natl. Acad. Sci. U.S.A. 95:15803-15808(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UR2_RANRI STANDARD; PRT; 1
P33715; O9PSX6;
01-FEB-1994 (Rel. 28, Created)
16-OCT-2001 (Rel. 40, Last scquence up
16-OCT-2001 (Rel. 40, Last annotation
                                                                                                                            PEPTIDE
                                                                                                                                                         SIGNAL
                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                           EMBL; AF104117; AAD13069.1;
                                                                                                                                                                                                                                                                            or send
                                                                                                                                                                                                                                                                                           entities
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=93075134; PubMed=1445302; Conlon J.M., O'Harte F., Smith D.D., Tonon M.-C., Vaudry H.; "Isolation and primary structure of urotensin II from the brain of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UTS2.
Rana ridibunda (Laughing frog) (Marsh frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Eukaryota; Metazoa; Chordata; Craniata; Ranoidea;
                                                                                                                                           ROPEP
                                                                                                                                                                     formone; Cleavage on
                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=99080095; PubMed=9861051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Urotensin II precursor (U-II) (UII).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=8406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 115-127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                      TISSUE SPECIFICITY: CENTRAL NERVOUS SYSTEM. SPINAL CORD. SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                 PQ0445; PQ0445
                                                                                                                                                                                                                                                                                                                                                                                                                       CORTICOTROPIN-RELEASING FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAERGDILRKADSSTNIFNPRGNLRKFQDESGQDPNILLSHLLARIWKPYKKRET-PDCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                     l Similarity
42; Conser
                                                                                                                                                                                                                                                                      s requires a license agreement (S an email to license@isb-sib.ch).
                                                                                                                                                                                 )2083; Urotensin_II; 1.
PS00984; UROTENSIN_II; 1.
                                                                                                                                                                                                          IPR001483; Urotensin_II.
                                                                                             115
121
127
                                     Conservative
                                                                                              AA;
                                                   18.4%;
31.1%;
                                                                                             14732 MW;
                                                                                                                                                                     pair
                                                                                                                                                                     e,
                                    19;
                                                                                                                                                                  basic residues;
                                                            Score 120.5;
                                                 Pred.
                                                                                                                        UROTENSIN II
                                                                                                                                                      POTENTIAL
                                                                                          FC26BC90E00C082E CRC64;
                                 Mismatches
                                                   o.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                                                                                                 moved. Usage by and for commercial (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      update
                                                .le-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AΑ
                                                            DB 1;
                                 55;
                                                                                                                                                                  Signal
                                 indels
                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                    AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ranidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Euteleostomi;
                               19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       frog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rana
                              Gaps
                               Ç,
```

```
Ş
                                     g
                                                               S
                                                                                                                                                          RESULT 5
UR2A_CYPCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       당
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                               Matches
                                                                                                                         Query Match
                                                                                                                                                          DISULFID
SEQUENCE
                                                                                                                                                                                      PEPTIDE
                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                                                                                      use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isb-or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                        Munekata E., Ohtaki T., Ichikawa T., McMaster D., Lederis K.;

(In) Rich D.H., Gross E. (eds.);

Proceedings of the 7th american peptide symposium, pp.69-72,

pierce Chemical Co., Rockford II. (1981).

-i- FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY

SYSTEM. IT HAS A SUGGESTED ROLE IN OSNOREGULATION AND AS A

CORTICOTROPIN-RELEASING FACTOR. THE NONHORMONAL PORTION OF THIS

PRECURSOR MAY BE A UROTENSIN BINDING PROTELY, UROPHYSIN.

-i- SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Obsako S., Ishida I., Ichikawa T., "Cloning and sequence analysis of curotensin II-alpha and gamma.";
J. Neurosci. 6:2730-2735(1986).
                                                                                                                                                                                                                                 Hormone; Cleavage on
                                                                                                                                                                                                                                                                                             EMBL; M14084; AAA49215.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cyprinus carpio (Common carp)
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygil; Teleostel; Ostarlophysi; Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-AUG-1987 (Rel. 05, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
UII alpha precursor [Contains: Urophysin alpha; Urotensin II-alpha].
                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                                                                                  the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 114-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cyprinidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=86307061; PubMed=2427672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P04560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UR2A_CYPCA
    59
                                                                                                            Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    113 KRAGNLSECFWKYCV 1.27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     112
                                     w
                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ц
                           CNLLLSFSVLLLSCTHLVAHPVTDTADMTY--SGPDSVEEAGGVSPDDFAVSDLNDLLQR 60
                                                       CLLFIGFLNPLLSL-----PLLDSREISFQLSAP---HEDARLTPEELERASLLQILPE 58
 MLGAERGDILRKADSSTNIENPRGNLRKFQDFSGQDPNILLSHLLARIWKPY----
                                                                                                                                                                                                                                             PF02083; Urotensin_II; 1.
TE; PS00984; UROTENSIN_II; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DKEAER-----DAEDIFSKEGFGLDAYNMDDKEELFDKHPRISLLSRLQSKDRKQFK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   G--AERGDILRKADSSTNIFNPRG-----NLRKFQDFSGQDPNI-LLSHLLARIWKPYK 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSKLEFCCLILAGSECSFRSLPIIVPSKGSLRLSESALDEGDLKSWDDETRLLRNLPMEV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KR--ETPDCFWKYCV
                                                                                              l Similarity
38; Conser
                                                                                                                                                                                                                                                                          IPR001483; Urotensin_II.
                                                                                                                                                       114
119
125 AA;
                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                     106
125
124
                                                                                                        13.7%;
                                                                                                                                                    13840 MW; 1FB6F86CA6B3A5AF CRC64
                                                                                                                                                                                                                                 pair
                                                                                                                                                                                                                                 0
                                                                                            16;
                                                                                       Pred. No. 0.01
5; Mismatches
                                                                                                          Score 90;
Pred. No.
                                                                                                                                                                                                                              basic residues;
                                                                                                                                                                                   UROTENSIN II-ALPHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cDNAs encoding precursors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Deguchi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       125
                                                                                                                                                                                                                                                                                                                                (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                ALPHA (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                There are no
                                                                                                                     DB 1; Length 125
                                                                                                        .016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AΑ
                                                                                           44;
                                                                                                                                                                                                                           Signal.
                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                             restrictions
                                                                                                                                                                                                                                                                                                                                                   and
                                                                                         44;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of.
                                                                                                                                                                                                                                                                                                                                                   tor
                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                   commercia:
110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                 way
                                                                                       7:
```

```
RESULT 2
UR2_MOUSE
    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DR DR FTT FTT SQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9QZQ3;
16-OCT-2001 (
16-OCT-2001 (
15-JUN-2002 (
                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hormone;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                               Coulouarn Y., Jegou S., Tostivint H., Vaudry H., Li) "Cloning, sequence analysis and tissue distribution rat urotensin II precursors.";
FEBS Lett. 457:28-32(1999).
1- FUNCTION: HIGHLY POTENT VASOCONSTRICTOR (BY SIMILAR CURRENT LANGE CONTINUE OF THE PROPERTY OF THE PROPE
                                                                                                           EMBL;
MGD; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last anotation update)
Urotensin II precursor (U-II) (UII).
                                                                                                                                                                     entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UR2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CONFLICT
    SIGNAL
                                                                Pfam; PF02083;
                                                                                MGD; MGI:1346329; Uts2.
InterPro; IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=99416011; PubMed=10486557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Spinal cord;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF02083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR001483; Urotensin_II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MIM;
                      formone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Secreted
TISSUE SPECIFICITY: BRAIN-SPECIFIC. PREDOMINANTLY
MOTONEURONS OF THE BRAINSTEM AND SPINAL CORD.
SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         604097;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                               AF172175; AAD55767.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
  Cleavage
                                     02083; Urotensin_II; 1.
PS00984; UROTENSIN_II; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cleavage on pair
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PS00984; UROTENSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Urotensin_II; 1.
84: UROTENSIN_II; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
on pair of basic residues;
20 POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
110
124
123
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27
14295
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of basic residues;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KSTSLCFGHFNSYP (IN LDSR -> IHDLLL (IN C7A5FC7EFE00D312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MYKLASCCLLFIGFLNPLL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UROTENSIN II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 655; PL
NO. 2.4e-61;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123
                                                                                                                                                                                         (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA
                                                                                                                                                                                                                                                                                                                                                                                                                                   (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N REF. 2).
N REF. 2).
CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lihrmann I.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -> METNVFHLMLCVTSARTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                                                                                                                                                                                                                                                                         EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                         IN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
```

```
RESULT 3
                                                                     8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              οy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SQ
FT
FT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local S
Matches 62
           Query Match
Best Local
   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROPEP
PEPTIDE
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2001
16-OCT-2001
16-OCT-2001
                                                      PEPTIDE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UR2_RAT
Q9QZQ4;
                                                                 Pfam; PF02083; Urotensin_II; 1.
PROSITE; PS00904; UROTENSIN_II; 1.
HOrmone; Cleavage on pair of basic residues;
SIGNAL 1 20 POTENTIAL.
PROPEE 21 104 POTENTIAL.
PROPEE 110 123 UROTENSIN II.
                                                                                                                                                                                       the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                       "Cloning, sequence analysis and tissue distribut rat urotensin II precursors."; FEBS Lett. 457:28-32(1999).
-!- FUNCTION: HIGHLY POTENT VASOCONSTRICTOR (BY
                                                                                                                                                                entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                             SEQUENCE
                                                                                                                                              EMBL; AF172174; AAD55766.1; -
                                                                                                                                                                                                                         between
                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through
                                                                                                                                                                                                                                                                    -!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: BRAIN-SPECIFIC
                                                                                                                                                                                                                                                                                                                                                TISSUE=Spinal cord;
MEDLINE=99416011; PubMed=10486557;
                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Urotensin II
                                                                                                                                                                                                                                                                                                                                      Coulouarn Y., Jegou S.,
                                                                                                                                                                                                                                                                                                                                                                                                       Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                             Rattus norvegicus (Rat).
                                                                                                                                                                                                                                                                                                                                                                                                                                         UTS2.
                                                                                                                                  InterPro; IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                        -!- SIMÎLÂRITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WKYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WKYCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                          PF02083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 l Similarity
62; Conser
            Similarity
                                                                                                                                                                                                                      the Swiss Institute of Bioinformatics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
110
117
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    124
                                                                                                                                                                                                                                                                                                                                                                                                                 Metazoa;
                                            123 AA;
                                                      21
110
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                (Rel. 40, Created)
(Rel. 40, Last sequence up
(Rel. 40, Last annotation
I precursor (U-II) (UII).
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104
123
122
13625
                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                            13614
           43.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           43.7%;
                                                                                                                                                                                                                                                                                                                                      Tostivint H.,
                                             MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MW.
 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19;
           Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 286.5; DB 1
Pred. No. 5.5e-23;
9; Mismatches 41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BY SIMILARITY.
: F96486195137F7F4 CRC64;
                                                       BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UROTENSIN II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                      Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                            E4FlA8EE124AF1EA CRC64;
 Mismatches
           NO.
                      282.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                         Vaudry H., Lihrmann e distribution of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        123
                                                                                                                                                                                                                                                                                                                                                                                                                                                          update)
                                                                                                                                                                                               There are no restrictions ong as its content is in
            1.4e-22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                      DB
 43;
                                                                                                                                                                                     Usage
                      1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    <u>'</u>1;
                                                                                                                                                                                                                        and the
                                                                                                                                                                                                                                                                                           SIMILARITY)
 Indels
                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                       bу
                                                                                                                                                                                                                                                                                                                          the
                                                                                                                                                                                        and
                                                                                                                                                                                                                        EMBL
                      123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123;
                                                                                                                                                                                                                                   ۵ı
                                                                                                                                                                                                                                                                                                                          mouse
 ω
--
                                                                                                                                                                                        for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
--
                                                                                                                                                                                                                                   collaboration
                                                                                                                                                                                                                        outstation
                                                                                                                                                                                                                                                                                                                                                                                                       Rattus
Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                       commercial
                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                   no
                                                                                                                                                                                                             9
                                                                                                                                                                                                way
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
```

ρy

1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60

Q9pf27 P80595 P58801 P53235

mus musculu rhizobium

xylella schizosacch

fas

saccharomyc saccharomyc Q40407 025702 025703 Q977q3 P28658 Q9jhx3 Q9jhx3 Q10337 P24151

mus Bu

musculu musculu

helicobacte thermococcu

```
Post-processing: Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                     286.5
282.5
120.5
90
87.5
71.5
71.5
70
69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score
 seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              •
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein search, using sw
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-831-907A-1
   100.0
43.17
118.4
113.47
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
110.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
10.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  112892 seqs, 41476328 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MYKLASCCLLFIGFLNPLLS......RIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March 10, 2003, 17:26:37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GenCore version Copyright (c) 1993 - 2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length DB
                                                                                                          Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match
 262
376
408
465
512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapext 0
                                                                                                          MFD_MYXXA
YCF1_ARATH
UR2_PLAFE
                                                                     CHER_CAMJE
EXD_DROME
                                                                                                                                                                                                                                                                                            COBI_MYCTU
EF1H_YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                            UR2A_CYPCA
UR2G_CYPCA
TRX_DROME
IOD3_XENLA
HXK1_DROME
                             GPT_CRILO
AS3B_HUMAN
                                                                                                                                                                                                                     YKZ6_CAEEL
                                                                                                                                                                                                                                                                                                                                                                                                        MDH_STRCO
BMP7_HUMAN
C4D1_DROME
SYI_AQUAE
                                                                                                                                                              DPOL_ADEG
                                                                                                                                                                           TYPA_ECO57
                                                                                                                                                                                                                                                                                                                               COAA_BACSU
                                                                                                                                                                                                                                                                                                                                                GNTP_ZYMMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UR2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ij
                                                                                                                                                                                                                                                        PERO_DROME
                                                                                                                                                                                                                                                                                                                                                                     DG1A_DEIRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UR2_RANRI
                                                                                                                                                                                                      TYPA_ECOLI
                                                                                                                                                                                                                                                                             YIK5_YEAST
                                                                                                                                                                                                                                                                                                                                                                                     NCAP_RINDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ٠.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Search time 7.03784 Seconds (without alignments) 730.773 Million cell update.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5.1.3
Compugen Ltd.
              933269

954570

954570

910677

936008

901603

901603

916962

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

92827

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9287

9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                    Q9k3j3
P18075
P37708
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9qzq3
Q9qzq4
P33715
                                                                                                                                                                                                                                                                                                                                                                                                                                                           P49899
                                                                                                                                                                                                                                                                                                                                                                     Q9rvml
                                                                                                                                                                                                                                                                                                                                                                                                                                            Q9nft9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          095399
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P06580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P04560
                                                                                                                                                                                                                                                                                                                                                                                                                                                           0 cyprinus ca
0 cyprinus ca
9 drosophila
9 xenopus lae
                                                                                                                                                                               B saccharomyc
5 saccharomyc
5 drosophila
3 caenorhabdi
2 caenorhabdi
2 escherichia
7 escherichia
                                                  cricetulus
                                                                                                                         myxococcus
arabidopsis
                                                                                                          platichthys
                                                                                                                                                                avian adeno
                                                                                                                                                                                                                                                                                                            mycobacteri
                                                                                                                                                                                                                                                                                                                                                                                                        homo
                                                                                                                                                                                                                                                                                                                                                                                                                                            drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      rattus norv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mus
              homo sapien
drosophila
                                                                                                                                                                                                                                                                                                                                 bacillus
                                                                                                                                                                                                                                                                                                                                                zymomonas m
                                                                                                                                                                                                                                                                                                                                                                     deinococcus
                                                                                                                                                                                                                                                                                                                                                                                     rinderpest
                                                                                                                                                                                                                                                                                                                                                                                                                         streptomyce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          homo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ridibu
                                                                                                                                                                                                                                                                                                                                                                                                        sapien
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        sapien
                                                                                                                                                                                                                                                                                                                                 su
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2-
RESULT 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UR2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ames R.S., Sarau H.M., Chambers J.K., Willette R.N., Aiyar N.V., Romanic A.M., Louden C.S., Foley J.J., Sauermelch C.F., Coatney R.W. Ao Z., Disa J., Holmes S.D., Stadel J.M., Martin J.D., Liu W.S., Glover G.I., Wilson S., McNulty D.E., Ellis C.E., Elshourbagy N.A., Shabon U., Trill J.J., Hay D.W.P., Ohlstein E.H., Bergsma D.J., Douglas S.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UR2_HUMAN STANDARD: PRT; 1
095399; Q9UKP7;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence up
15-JUN-2002 (Rel. 41, Last annotation
Urotensin II precursor (U-II) (UII).
              EMBL; AF104118; AAD13070.1; -. EMBL; AF140630; AAD55577.1; -. EMBL; Z98884; CAB63148.1; -.
                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                "Human urotensin-II is a potent vasoconstrictor orphan receptor GPR14.";
Nature 401:282-286(1999).
[3]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coulouarn Y., Lihrmann I., Jegou S., Anouar Y., Tostivint H., Beauvillain J.C., Conlon J.M., Bern H.A., Vaudry H.; Beauvillain J.C., Conlon de J.M., Bern H.A., Vaudry H.; Conloning of the cDNA encoding the unchansin II precursor in frog human reveals intense expression of the urotensin II gene in motoneurons of the spinal cord.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. MEDLINE=99427933; PubMed=10499587;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Spinal cord;
MEDLINE=99080095; PubMed=9861051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UTS2.
                                                                                                                                                                                                                                                                                                                               Pearce A.
                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Natl. Acad. Sci. U.S.A. 95:15803-15808(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0.00.00.00.5
0.00.00.00.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PSBB_NARPS
QUEA_HELPY
KGPF_THELI
KGPF_THELI
ATXX_MOUSE
12.IR_MOUSE
21.IR_MOUSE
YBMS_SCHPO
NODC_RHILP
DADA_XYLFA
APY_SOLTU
RIKZ_MOUSE
YG22_YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YJJO_YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                              databases
                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                     agonist
```

for

R.W.

Result No.

Database

Maximum Minimum

DB DB

Sequence:

Searched

```
R;Johnson, A.F.; de la Bastide, M.; Lodhi, M.; Hoffman, J.; Hasegawa, A.; Gnoj, L.: Gott Martienssen, R.; McCombie, W. submitted to the EMBL Data Library, May 1997 A;Description: The sequence of the Arabidopsis thaliana T10M13 BAC. A;Reference number: Z14346 A;Accession: T01521
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                syntaxin homolog T10M13.19 - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 19-Feb-1999 #sequence_revision 19-Feb-1999 #text_change 01-Dec-2000 C;Accession: T01521; T01430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                                                                                                                                                      A;Cross references: EMBL:AF075597; NID:g3298610; PID:g3377798
A;Experimental source: cultivar Columbia
C;Genetics:
A;Map position: 4S
A;Introns: 64/2; 156/3; 186/3; 211/3; 237/3; 259/3; 286/3
A;Note: T10M13.19; T2H3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Kailcki, J.; Gibson, A.
submitted to the EMBL Data Library, August 1998
A;Description: The sequence of A. thaliana T2H3.
A;Reference number: Z14324
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-321 <JOH>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Accession: T01430
A; Status: translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-286, 'V' < KAL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: EMBL:AF001308; NID:g2104523; PID:g3912925
A;Experimental source: cultivar Columbia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Status: translated from GB/EMBL/DDBJ
Search completed: March 10, 2003, 17:47:25 Job time : 15.4054 secs
                                                                                                  рь
                                                                                                                                               Š
                                                                                                                                                                                                 В
                                                                                                                                                                                                                                            ŠÕ
                                                                                                                                                                                                                                                                                              Query Match 10.8%; Score 70.5; I Best Local Similarity 30.4%; Pred. No. 15; Matches 24; Conservative 11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               170 TQIEVSDLRAKANPAVGKOEGDRCKELVSEKSCIEE--SLRNFREEAKED 217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 -----
                                                                                                                                               73 SSTNIFNPRC----NLRK 86
                                                                                                                                                                                                    79
                                                                                                                                                                                                                                            25 DSREISFOLSAPHEDARLTPEELERASLLQILP-----EMLGAERGDILRKAD 72
                                                                                                  KRLQMLSTRGPSEESNLRK 153
                                                                                                                                                                                                 DSEEITFNI----QKVRDKMNELAKAHSKALMPTFGDNKGIHREVEMLTHEITDLLRKSE 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ----GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQD 94
                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                           23; Indels 21; Gaps
                                                                                                                                                                                                                                                                                                                                                        Length 321;
                                                                                                                                                                                                                                                                                                                3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .
```

```
A;Molecule type: DNA
A;Residues: 1-557 <WIL>
A;Cross-references: EMBL:Z74027; PIDN:CAA98422.1; GSPDB:GN00023; CESP:Cl3G3.3a
                                                                                                                                                                                                                                                            A:Experimental source: C:Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical protein C13G3.3a - Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Species: Caenorhabditis elegans C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C;Accession: T19241
                                                                                                                                                                                                                                         A;Gene: CESP:C13G3.3a
                                                                                                                                                                                                                                                                                                                                              A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                      A; Reference number: A; Accession: T19241
                                                                                                                                                                                                                                                                                                                                                                                       submitted to the EMBL Data A; Reference number: Z19096
                                                                                                                                                                                                    A; Introns:
                                                                                                                                                                                                                          A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                             R; McMurray, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Superfamily: unassigned ATP-binding cassette proteins; ATP-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Cross-references: GB:BA000008; NID:g8979063; PIDN:BAA98898.1; A;Experimental source: strain J138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Shirai, M.; Hirakawa, H.; Kimoto, M.; Tabuchi, M.; Kishi, F.; Ouchi, K.; Nucleic Acids Res. 28, 2311-2314, 2000
A;Title: Comparison of whole genome sequences of chlamydia pneumoniae J138.
A;Reference number: A86491; MUID:20330349; PMID:10871362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABC transporter ATPase [imported] - Chlamydophila pneumoniae (strain J138) C:Species: Chlamydophila pneumoniae, Chlamydia pneumoniae C:Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 23-Mar-2001 C:Accession: H86576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: abcX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Residues: 1-256 <STO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession: H86576
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                   Query Match
Best Local
                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          103 --YNARRRANQEGDISIDEFNTLLSTVL----ETYEYNATTDLF 140
                    63
                                                        65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         76 NIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54
                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   23 LLDSREISFQ----LSAPHEDARLTPEELERASL---LQILPEMLGAERGDILRKADSST 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     76
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23
ERGDILRKADS--
                                                    KLRQCCVVF-DFANDALS-----DLKF-
                                                                                 KLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           --YNARRANQEGDISIDEFNTLLSTVL----ETYEYNATTDLF 140
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LLDSREISFQ----LSAPHEDARLTPEELERASL---LQILPEMLGAERGDILRKADSST 75
                                                                                                                                                                                                  tion: 5
21/1; 52/1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LVSSGEIALQEQNLLS-----MLPEERSRAGLFVGFQMPPEIPGVNNKMFLRDA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCF 119
                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative . 11; Mismatches
                                                                                                                                                                                                  156/3; 510/3
                                                                                                                                                                                                                                                                           clone C13G3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11.1%;
31.7%;
                                                                                                                                           11.1%; Score 72.5;
26.4%; Pred. No. 18;
                                                                                                                                                                                                                                                                                                                                                                                                      Library, June
                STNIFNP 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ----MLPEERSRAGLFVGFQMPPEIPGVNNKMFLRDA----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 73; DB Pred. No. 6.5;
                                                                                                                        Mismatches
                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                        14;
                                                                                                                                                            2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         36;
                                                  -KEVKRAALNELVDHVSGA 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 256
                                                                                                                                                          Length 557;
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                      33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GSPDB:GN00142
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24;
                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cassette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shiba,
                                                                                                                    ن.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ū
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T.;
                                                                                                                                                     A; Map posit
A; Introns:
                                                                                                                                                                                       망
                                           Ω
                                                                                                                                                                                                                                                                                                                                                   submitted to the EMBL Data Library, July 1996
                                                                                                                                                                                                                                                                                                                     A; Reference number: Z19507
A; Accession: T22062
                                                                                                                                                                                                                                                                                                                                                                              R; McMurray, A.
                                                                                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:277658; PIDN:CAB01162.1; GSPDB:GN00023; CESP:F40G12.11
A;Experimental source: clone F14D7
                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        submitted to the EMBL Data Library, July 1996 A:Reference number: {\tt Z19340}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 29-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Residues:
                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: T20890
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R; Berks, M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein F40Gl2.11 - Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Introns: 21/1; 56/1; 160/3; 514/3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Cross references: EMBL:Z74027; PIDN:CAA98423.1; A;Experimental source: clone C13G3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: DNA
A; Residues: 1-561 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           submitted to the EMBL Data Library, A; Reference number: Z19096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein C13G3.3b - Caenorhabditis elegans C:Species: Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Gene: CESP:Cl3G3.3b
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Molecule
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Status: preliminary; translated from GB/EMBL/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: T19242
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; McMurray, A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           T19242
                                                                                                  Query Match
Best Local
                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Species: Caenorhabditis elegans
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                      position:
         126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                108 PKGSL---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   104
                                                                               Local Similarity es 24; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63 ERGDILRKADS-----STNIFNP 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          69
                              1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity 26.4 les 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 KLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGA 62
     LYALSERCIIFAGVLNQFL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    KLRQCCVVF-DFANDALS-----DLKF----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PKGSL---SDAVYPEAIGMFSTNLFRP 127
                                                                                                                                                     100/3; 261/2
                                                                                                                                                                                                                                                                                                                                                                                                                                 1-381 <WIL>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T20890;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               T19242
                                                                                                                                                                                                                                                                                                                                                                                                                                                   DNA
                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -SDAVYPEAIGMFSTNLFRP 131
                                                                                            10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.1%;
26.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17;
                                                                           17;
                                                                         Score 71; DB
Pred. No. 17;
L7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 72.5;
Pred. No. 18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        June 1996
-PTEKRRSKTDFLTENMLAALLSELI 169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DВ
                                                                                                           2;
                                                                           35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GSPDB:GN00023;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --KEVKRAALNELVDHVSGA 107
                                                                                                           Length 381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                       34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CESP:Cl3G3.3b
                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

ū

Qy DЬ δÃ

ω

î

```
C:Specles: Aeropyrum pernix
C:Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Aug-1999
C:Accession: G72575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:AE001113; GB:AE000782; NID:g2689436; PIDN:AAB91305.1; PID:g265073
C;Superfamily: Archaeoglobus fulgidus conserved hypothetical protein AF2358
                                                                                                                                      A:Authors: Hunter, J.L.; Jenkins, J.; Johnson-Hopson, C.; Khan, S.; Khaykin, C.A.; Li, J.H.; Li, Y.; Lin, X.; Liu, S.X.; Liu, Z.A.; Luros, J.S.; Maiti, R. Rizzo, M.; Rooney, T.; Rowley, D.; Sakano, H. A;Authors: Salzberg, S.L.; Schwartz, J.R.; Shinn, P.; Southwick, A.M.; Sun, F. ker, M.; Wu, D.; Yu, G.; Fraser, C.M.; Venter, J.C.; Davis, R.W. A;Title: Sequence and analysis of chromosome 1 of the plant Arabidopsis. A;Reference number: A86141; MUID:21016719; PMID:11130712
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
E86170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Reference number: A72450; A; Accession: G72575
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, Aeropyn A;Reference number: A72450; MUID:99310339; PMID:10382966
                                                                                                                                                                                                                                                                                                    R;Theologis, A.; Ecker, J.R.; Palm, C.J.; Federspiel, N.A.; Kaul, Chin, C.W.; Chung, M.K.; Conn, L.; Conway, A.B.; Conway, A.R.; Clansen, N.F.; Hughes, B.; Huizar, L.
Nature 408, 816-820, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein [imported] - Arabidopsis thaliana
C:Species: Arabidopsis thaliana (mouse-ear cress)
C:Date: 02-Mar-2001 #sequence_revision 02-Mar-2001 #text_change 31-Mar-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: DDBJ:AP000062; NID:g5105244; PIDN:BAA80892.1; A;Experimental source: strain K1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Residues: 1-433 <KAW>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DNA Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       awa,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Kawarabayasl,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hypothetical protein APE1887 - Aeropyrum pernix (strain
A; Cross-references:
C; Genetics:
                                               A; Molecule type: DNA
A; Residues: 1-534 <STO>
                                                                                                                   A; Reference number: A86141; A; Accession: E86170
                                                                                                                                                                                                                                                                                                                                                                                                C; Accession:
                                                                                           A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               warabbyasl, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K.;
H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki,
Res. 6, 83-101, 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               171 LVSSR-----AWHEDLARLGVELVEVDPIEFARYVAEESVPESLGEEVLRRGEVLDLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  72 DSSTNIFNPRGNLRKFQDFSGQDPNTLLSHLLARIWKPY-KKRETPDCFWKY 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         23 LLDSREISFQLSAPHED-ARL-----TPEELERASLLQILPEMLGAE----RGDILRKA 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APE1887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DSSTNIFNPRGNLRKFQD------FSGQDPNILLSHLLARI-WKPYK 111: : : |:||: : : |:||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1GFLNPLLSLPLLDSRE1SFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKA 71
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   IPFLKELLKIRKKQGRKLMFE----HESC---GQQLKRA-----MIPLEKGELIKDK 318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NKRHEVL---GDLRKFAEQMADKIKWDTSNKNYILTHNVSSVDWQHYK 363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DG----EPKKSLRVYR----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                  E86170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                         GB:AE005172; NID:g4204293;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11.8%;
24.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11.7%;
29.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 77;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 76.5;
Pred. No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ----AIKRMWKSRGLDAVSPACWWFY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 2;
                            PldN:AAD10674.1; GSPDB:GN00141
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          433;
                                                                                                                                                                                                                                                                                                                                                        Creasy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26;
                                                                                                                                                                                                                                                                                                                                                     S.; White, Creasy, T.H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PID:d1044678;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                 Η.,
                                                                                                                                                                                                                                                                                                                                                     O.; Alonso,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   9
                                                                                                                                                                                                                                                                                      [<del>1</del>]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7;
                                                                                                                                                                                                                                                                Marziali
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID:g51
                                                                                                                                                                                                                                                                                        Kim,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Takah
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ٦
;
```

```
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-827 <DOU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Title: The highly reduced genome of an enslaved algal nucleus A;Reference number: A99082; MUID:11323671; PMID:11323671 A;Accession: G90092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Accession: G90092
R;Douglas, S.; Zauner, S.; Fraunholz, M.;
Nature 410, 1091-1096, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hypothetical protein U5 snRNP [imported] - Guillardia theta nucleomorph C;Species: nucleomorph Guillardia theta A;Note: a nucleomorph is the vestigial nucleus of a eukaryotic endosymbiont C;Date: 10-May-2001 #sequence_revision 10-May-2001 #text_change 24-May-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 G90092
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                             A;Title: Comparative genomes of Clamydia pneumoniae and C. A;Reference number: A72000; MUID:99206606; PMID:10192388 A;Accession: A72048
                                                                                                                                                                                                                                                                                                                                                                                 ABC transporter ATPase - Chlamydophila pneumoniae (strain CWL029)
C;Species: Chlamydophila pneumoniae, Chlamydia pneumoniae
C;Date: 23-Apr-1999 #sequence_revision 23-Apr-1999 #text_change 05-May-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Keywords: nucleomorph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C; Genetics:
                                                                                                                                                                                                   A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-256 <ARN>
                                                                                                                                                                                                                                                                                                                                           R; Kalman, S.; Mitchell, W.; Marathe, R.; Lammel, C.; Fan, J.; Ollnger, L.; Grimwood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Genome: nucleomorph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Map position: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:AF165818; NID:g13794496; PIDN:AAK39871.1;
                                                                            C;Superfamily: unassigned ATP-binding F;17-227/Domain: ATP-binding cassette
                                                                                                                   A; Gene:
                                                                                                                                            C; Genetics:
                                                                                                                                                            A; Experimental source: strain CWL029
                                                                                                                                                                               A; Cross-references: GB: AE001651; GB: AE001363; NID: g4376985; PIDN: AAD18830.1;
                                                                                                                                                                                                                                                                                                                           Nature Genet. 21, 385-389, 1999
                                                                                                                                                                                                                                                                                                                                                                C; Accession: A72048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity Matches 26; Conser
                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          405 VITSNEMOFFFEEQL---HRMECITQEAVLFSDILCQIIDMIGPEKENCITLQDLKGSKL 461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 462 SANVENILENLNKEMAFETRDPFLI------RQEREDPN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               192 ELKMTPDEVQK-RILQILDELNYLALHKVINKSVLSKKNINFFNPLNDNVCFSALSQGWI 250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   251 FNLNQFSGLYMISQPSICLSQKDLSERIWNDKK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        74 STNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPD 117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 23 LLDSREISF----QLSAPHEDARLTPEELERASLLQILPEMLGAERGDI-----LRKADS 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39 DARLTPEELERASLLQILPEMLGAERGDILRK---ADSSTNIFNP------RGNL 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      U5 snRNP
                                                                                                                         abcx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RKFQDFSG----QDPNILLSH--LLARIWKPYK 111
Similarity
33; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11.4%; 28.0%;
                  11.1%; Score 73; I
31.7%; Pred. No. 6.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 74.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                cassette proteins;
homology <ABC>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Beaton, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   283
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18;
                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ВВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                       Length 256;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Penny, S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 827;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                     ATP-blnding
                                                                                                                                                                                                                                                                                                            trachomatis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GSPDB:GN00150
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                         cassette homolog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                L.T.; Wu,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
                                                                                                                                                                                     PID:9437
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ×
::
```

Matches

Conservative

Mismatches

36;

Indels

24;

Gaps

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Gropp, F.; Gropp, R.; Betlach, M.C.
submitted to the EMBL Data Library, Ju
A;Description: The fourth gene in the
A;Reference number: Z22849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Species: Halobacte
C; Date: 21-Jan-2000
C; Accession: T44815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ.
                                                                                                                                                                                                                                                                                                                                         RESULT
T48314
                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ър
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Gene: blp
C;Superfami
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: T44815
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δõ
                                                                                                                                                                                                                         ewes, H.W.; Rudd, S.; Lemcke, K.; submitted to the Protein Sequence
                                                                                                                                                                                                                                                     R;Bevan, M.; Terryn, N.; Ardiles, W.; Buysshaert, C.; Dasseville,
                                                                                                                                                                                                                                                                                      hypothetical protein F9G14.240 - Arabidopsis thaliana C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 20-Apr.2000 #sequence_revision 20-Apr.2000 #t
                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references: EMBL:L22007; PIDN:AAD15050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Residues: 1-140 <GRO>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypothetical
                                                                                                                                                                                                                                                                           C; Accession:
                                                                                               A; Experimental source: cultivar C; Genetics:
                                                                                                                               A; Cross-references: EMBL: AL162973
                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-469 <BEV>
                                                                                                                                                                                            A;Reference number: Z24491
A;Accession: T48314
                                                 A; Note:
                                                                             A; Map position: 5
                                                                                                                                                                         A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Status: translated from GB/EMBL/DDB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Date: 21-Jan-2000 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /pothetical protein blp [imported] -.Halobacterium salinarum
Species: Halobacterium salinarum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
                                                                 ;Introns: 315/3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
 Best
                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              111
                                                                                                                                                                                                                                                                                                                                                                                                          115
                                                                                                                                                                                                                                                                                                                                                                                                                                      103 LARIWKPYKKRE 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             63
 Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            σ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4 LASCCLLFIGFLNPLLSLPLLDSREISFQLSAP---HEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the source is
                                                   F9G14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SRROFRKRGGGADCFWKYCI 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VAGYSPLF----SQENIKVP----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LLSCSVLLLS-CSHLLAHPVTDTADMTY--SGPDSVEEAGGVNPDDFSVSDLNEHLQRAA 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TVEDIERVRORRLVQELTGAIDGTITYRLSRTHHVADLRGRVRL-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHL 102
                                                                                                                                                                                                                                                                                                                                                                                                          LAPIAKAYNKRE 126
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
 Similarity
                                                                                                                                                                                                                                                                              T48314
                                                   . 240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Halobacterium halobium hypothetical protein blp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -KKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    designated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12.2%;
29.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25.7%;
 12.1%;
26.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      꼰
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16;
                                                                                                              Columbia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      as Halobacterium halobium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 0.088;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 80; DB Pred. No. 0.6;
                                                                                                                                                                                                                           Mayer, K.F.
Database, F
 Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                July 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 dod
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-Jan-2000 #text_change
79.5;
No. 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -GQIPKEALRELL--LEKPYRLIPPRGLWG 105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                gene
                                                                                                              BAC
                                                                                                                                                                                                                           April 2000
                                                                                                              clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cluster
                DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       27;
                  2
                                                                                                                                                                                                                                                                                          #text_change 20-Apr-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 140;
                  Length 469;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 co-regulated with the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PDTVIESV 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-Jul-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                            R.; De Clerck,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۳.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   dod
                                                                                                                                                                                                                                                              ₽
.
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gen
                                                                                                                                                                                                                                                              De
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Accession: A35085; A38240
R;Mazo, A.M.; Huang, D.H.; Mozer, B.A.; Dawid, I.B.
Proc. Natl. Acad. Sci. U.S.A. 87, 2112-2116, 1990
A;Title: The trithorax gene, a trans-acting regulator of A;Reference number: A35085; MUID:90192757; PMID:2107543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ΩV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: FlyBase:FBgn0003862
C;Superfamily: Drosophila trithorax protein
C;Keywords: DNA binding; transcription regulation; zinc finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; molecule type: mrNA
A; Residues: 1-2361,'Y',2363-2397,'N',2399-2405,'N',2407-2411,'N',2413-3759 <MA2>
A; Cross-references: GB:M31617; NID:9158817; PID:9158818
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: mRNA
A; Residues: 1-3759 <MAZ>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Species: Drosophila melanogaster
C;Date: 04-Dec-1992 *sequence_revision 04-Dec-1992 *text_change 20-Sep-1999
                                                         A;Title: The complete genome sequence of the hyperthermophilic, A;Reference number: A69250; MUID:98049343; PMID:9389475 A;Accession: F69544
                                                                                                                   Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; Nature 390, 364-370, 1997
A; Authors: Utterback, T.; Cotton, M.D.; Spriggs, T.; Artiach, P.; Smith, H.O.; Woese, C.R.; Venter, J.C.
                                                                                                                                                                                    R;Klenk, H.P.; Clayton, R.A.; Tomb, J.F.; White, O.; Nelson, K.E.; Ketchum, ; Fleischmann, R.D.; Quackenbush, J.; Lee, N.H.; Sutton, G.G.; Gill, S.; K. Glodek, A.; Zhou, L.; Overbeek, R.; Gocayne, J.D.; Weidman, J.F.; McDonald
                                                                                                                                                                                                                                                                                               conserved hypothetical protein AF2358 - C:Species: Archaeoglobus fulgidus
                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             S
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: FlyBase:trx
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: A38240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      submitted to GenBank, January 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R; Mazo,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Accession: A35085
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      trithorax protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A35085
                                                                                                                                                                                                                                                                             C;Date: 05-Dec-1997 #sequence_revision 05-Dec-1997 #text_change 24-Nov-1999
                                                                                                                                                                                                                                                                                                                                                F69544
                    A; Molecule
                                   A; Status: preliminary; nucleic acid sequence
                                                                                                                                                                                                                                                       C; Accession: F69544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Accession: A38240
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     293
                                                                                                                                                                                                                                                                                                                                                                                                                                     903
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HLLARIWKPYKKRE 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MQIVAPYIHYLRLRDSEAHCTFVDVSSLTEANVDVSTFHPR---TCYHDFDPLDPHDLLV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMLGAERGDILRKADS --
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LTDCTMSDESFLEILSGCPILESLSLKFCMSLKYLNLSKSLRLTRLEIERISYIRAPMLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LASCCLLFIGFLNPLLSLPLLDSREISFOLSAPH----EDARLTPEELERASLLQ--ILP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DFSGODPNILLSHLLARIWK 108
                                                                                                                                                                                                                                                                                                                                                                                                                                       TASSSSPSVVASTSVK - - WK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ISFQLPAAH----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNPRGNLRKFQ 88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -MVQTMLKTFQKVE 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein - fruit fly (Drosophila
Drosophila melanogaster
               type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
KLE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ·----RSRLSAILPPGM·--RGEAAAREEKSAELLSPTGSLRFTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    12.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                       920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 79;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                       Archaeoglobus fulgidus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        melanogaster)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -STNIFNPRGNLRKFQDFSGQDPNILLS 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    38;
                                          not shown;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 3759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                            translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the bithorax complex in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27;
                                                                                                        sulfate-reducing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16;
                                                                                                                                                   Kaine,
                                                                                                                                                                                             McDonald,
                                            not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           902
                                                                                                                                                   B.P.; Sykes
                                                                                                                                                                                                                   Kirkness,
                                                                                                                                                                                                                                         K.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ω
                                                                                                          arch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Dros
```

protein -

Run on:

Title: Perfect score:

Scoring table: Sequence:

hypothetical prote hypothetical prote peroxidase (EC 1.1 C14B9.5 protein -

translation elonga hypothetical prote hypothetical prote probable helicase hypothetical prote probable integral probable 60s acidi

hypothetical prote

prenyl transferase

probable probable

cobl prot

pantothenate kinas probable cobl prot

```
Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Post-processing: Minimum Match 08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NO. 1s the number of results predicted by chance to have a greater than or equal to the score of the result being printed, s derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      March 10, 2003, 17:36:23 ; Search time 13.4054 Seconds (without alignments) 889.243 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US-09-831-907A-1
655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         283224 segs, 96134422 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MYKLASCCLLFIGFLNPLLS......RIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GenCore version 5.1.3 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                         DВ
                                                                                                            AD2166
F86311
C70813
T08538
T02345
                                                                                                                                                                                                                                              G90092
A72048
H86576
                                                          T15863
F75449
                                                                                    BMHU7
T01134
                                                                                                                                                                                                                   T19242
                                                                                                                                                                                                                                                                                   F69544
G72575
E86170
                                                                                                                                                                                          T20890
                                                                                                                                                                               B84504
                                                                                                                                                                                                                                   T19241
                                                                                                                                                                                                                                                                                                                                                                                                        Ĭ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ¥S
                                                                                                                                                                                                                                                                                                                                                                                                                                             SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               mode.l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                283224
                                          hypothetical prote
dGTP triphosphohyd
sltl protein - fis
                                                                                                                                                                                                                                          hypothetical prote
ABC transporter AT
ABC transporter AT
                              hypothetical prote
                                                                                 probable protein k
                                                                                            bone morphogenetic
                                                                                                         hypothetical prote
                                                                                                                                    hypothetical prote
                                                                                                                                                 two-component sens
F11A6.2 protein -
                                                                                                                                                                           probable retroelem
                                                                                                                                                                                       syntaxin homolog T
                                                                                                                                                                                                    hypothetical prote
                                                                                                                                                                                                               hypothetical prote hypothetical prote
                                                                                                                                                                                                                                                                                 hypothetical prote hypothetical prote
                                                                                                                                                                                                                                                                                                          trithorax protein conserved hypothet
                                                                                                                                                                                                                                                                                                                                     hypothetical
hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                    Description
                                                                                                                                                                                                                                                                                                                                                              urotensin II-gamma
                                                                                                                                                                                                                                                                                                                                                                         urotensin II-alpha
                prote
                                                                                                                                                                                                                                                                                                                                     prote
                                                                                                                                                                                                                                                                                                                                                 prote
                        A:Status: preliminary; translated from GB/EMBL/DDBJ
A:Molecule type: mRNA
A:Residues: 1-125 COHS>
A:Cross-references: GB:M14088; NID:9213068; PIDN:AAA49216.1; PID:9213069
C:Superfamily: urotensin II
                                                                                        urotensin II-gamma precursor - common carp C:Species: Cyprinus carpio (common carp) C:Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999 C:Accession: 150499
R:Ohsako, S:: Ishida, I:: Ichikawa, T:: Deguchi, T:
J. Neurosci. 6, 2730-2735, 1986
A:Title: Cloning and sequence analysis of cDNAs encoding precursors of urotensin A:Reference number: 150498; MUID:86307061; PMID:2427672
A:Accession: 150499
                                                                                                                                                                                                               RESULT
I50499
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                               δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GB:M14084; NID:g213066; PIDN:AAA49215.1; PID:g213067 C;Superfamily: urotensin II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Title: Cloning and sequence analysis of cDNAs encoding precursors of urotensin II-a A;Reference number: I50498; MUID:86307061; PMID:2427672 A;Accession: I50498
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: mRNA
A;Residues: 1-125 <OHS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
I50498
  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             111 -----KKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                 104 WGSRRQFRKRGGGADCFWKYCV 125
                                                                                                                                                                                                                                                                                                                  61 AAVVEYSPLL----SRENIKVP-----
                                                                                                                                                                                                                                                                                                                                        59 MLGAERGDILRKADSSTNIENPRGNLRKEQDESGQDPNILLSHLLARIWKPY----- 110
                                                                                                                                                                                                                                                                                                                                                                  3 CNLLLSFSVLLLSCTHLVAHPVTDTADMTY--SGPDSVEEAGGVSPDDFAVSDLNDLLQR 60
                                                                                                                                                                                                                                                                                                                                                                                         8 CLLFIGFLNPLLSL-----PLLDSREISFQLSAP---HEDARLTPEELERASLLQILPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           66
66
66
66
66
66
66
66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67 68
67 68
67 67
67 67
                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity
38; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           312
326
431
834
859
1953
734
366
475
686
686
 13.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                       13.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        T41157
E86647
T38260
T38260
T39827
T46372
T40642
T02196
E84205
S37906
S37907
S28222
S48467
S28222
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C69965
E70764
A85043
                                                                                                                                                                                                                                                                                                                                                                                                                       Score 90; DB 2;
Pred. No. 0.049;
6; Mismatches 4
 Score 87.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ALIGNMENTS
                                                                                                                                                                                                                                                                                                                  -----GQIPKEALRELL--LEKPYRLIPPSGL 103
DΒ
2
                                                                                                                                                                                                                                                                                                                                                                                                                         44;
                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 125
Length 125;
                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
```

44;

Gaps

7;

Result

Query Match

Length

79.5 79

Minimum DB seq Maximum DB seq

Database

PIR_73:* Listing

pir1:*
pir2:*
pir3:*
pir4:*

```
Qy
                                                                                                                                                                                                                                                                   рь
                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION NUMBER: 60/091544
PRIOR APPLICATION NUMBER: 60/091519
PRIOR APPLICATION NUMBER: 60/091519
PRIOR FILING DATE: 1998-07-02
PRIOR FILING DATE: 1998-07-02
PRIOR FILING DATE: 1998-07-02
PRIOR APPLICATION NUMBER: 60/091633
PRIOR APPLICATION NUMBER: 60/091978
PRIOR APPLICATION NUMBER: 60/091978
PRIOR APPLICATION NUMBER: 60/091978
PRIOR APPLICATION NUMBER: 60/091982
PRIOR APPLICATION NUMBER: 60/091982
PRIOR APPLICATION NUMBER: 60/091982
PRIOR APPLICATION NUMBER: 60/091982
PRIOR APPLICATION NUMBER: 60/092182
PRIOR APPLICATION NUMBER: 60/092182
PRIOR FILING DATE: 1998-07-07
PRIOR APPLICATION NUMBER: 60/092182
PRIOR FILING DATE: 1998-07-09
                                                                                                                                δÃ
                                                                                                                                                                             д
Search completed: March 10, 2003, 17:48:53 Job time : 10.7189 secs
                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                        Query Match 99.2%;
Best Local Similarity 99.2%;
Matches I23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/090863
PRIOR FILING DATE: 1998-06-26
PRIOR APPLICATION NUMBER: 60/091360
PRIOR FILING DATE: 1998-07-01
PRIOR APPLICATION NUMBER: 60/091478
PRIOR FILING DATE: 1998-07-02
PRIOR FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
PRIOR
PRIOR
                                                                                          I21 KYCV I24
                                                                                                                                    121 KYCV 124
                                                                                                                                                                           APPLICATION NUMBER: 60/090696
FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090862
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090695
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090694
                                                                                                                                                                                                                                                                                                                                                        Score 650; DB 9; Length 124; Pred. No. 3.2e-66; O; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                             Gaps
```

```
PRIOR APPLICATION NUMBER: 60/088026
PRIOR FILING DATE: 1998-06-04
PRIOR APPLICATION NUMBER: 60/088028
PRIOR FILING DATE: 1998-06-04
PRIOR FILING DATE: 1998-06-04
PRIOR FILING DATE: 1998-06-04
PRIOR FILING DATE: 1998-06-04
PRIOR APPLICATION NUMBER: 60/088039
                                                                                                                                            PRIOR PRIOR
                                                                                                                                                                                                         PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTICE TITLE OF INVENTICE OF INVENTICE. I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE: 1998-06-04
PRIOR APPLICATION NUMBER: 60/088025
PRIOR FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/087827
PRIOR FILING DATE: 1998-06-03
PRIOR APPLICATION NUMBER: 60/088021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/997,666
                                                                                                                                                                                                                                                                                                                                                                           OR APPLICATION NUMBER: 60/088030
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088033
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088326
OR FILING DATE: 1998-06-04
                                                                                          R APPLICATION NUMBER: (R FILING DATE: 1998-06-R APPLICATION NUMBER: (R FILING DATE: 1998-06-
                                                        APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-10
                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/
FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/088202 FILING DATE: 1998-06-05
                                              APPLICATION NUMBER:
                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087609
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CANT: Zhang, Z
E OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/087607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/
FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/083322 FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/062250 FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/087759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/065311 FILING DATE: 1997-I1-I3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ION: Acids Encoding the Same P2730P1C42
                                1998-06-10
                                                                                           I998-06-10
                                                                                                                          I998-06-10
                                                                                                                                                         1998-06-10
                                                                                                                                                                                                                        1998-06-09
                                                                                                                                                                                                                                                                                                                                                 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Secreted and Transmembrane Polypeptides and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-11-1
            60/088858
                                         60/088826
                                                                          60/088824
                                                                                                                                       60/088742
                                                                                                                                                                                                    60/088734
                                                                                                        60/088810
                                                                                                                                                                       60/088738
                                                                                                                                                                                                                                     60/088655
                                                                                                                                                                                                                                                                  60/088217
                                                                                                                                                                                                                                                                                                  60/088212
                                                                                                                                                                                                                                                                                                                                                               60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/087106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/049787
                                                                               PRIOR PRIOR
                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00
                                                             FILING DATE: 1998-06-APPLICATION NUMBER: 6
FILING DATE: 1998-06-
                                                                                                                                                                       FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                   FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090431
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090435
                                              APPLICATION NUMBER:
                                                                                                                                         APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                     FILING DATE: 1998-0: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/090429
                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/089948 FILING DATE: 1998-06-19 APPLICATION NUMBER: 60/089952 FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-19
                                                                                                                            FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-22
APPLICATION NUMBER: 60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/089907
FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/089908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/089600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/1
FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DATE: 1998-06-11
                             1998-06-25
                                                           1998-06-25
                                                                                                                                                                                                                                                                                       1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER: 60/089598
1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER: 60/089599
1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-12
              60/090690
                                             60/090678
                                                                          60/090676
                                                                                                          60/090557
                                                                                                                                          60/090542
                                                                                                                                                                         60/090540
                                                                                                                                                                                                        60/090535
                                                                                                                                                                                                                                      60/090472
                                                                                                                                                                                                                                                                     60/090445
                                                                                                                                                                                                                                                                                                    60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                              60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/089947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  108680/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/089653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/088861
```

```
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/089512 FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/089599 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                       FILING
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                             APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090542 FILING DATE: 1998-06-24
                                                                                                                                                                                  FILING DATE: APPLICATION
                                                                                                                                                                                                              FILING DATE: APPLICATION 1
                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                       FILING DATE: 1998-06-24
                                                      APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-25
                                                                                  APPLICATION NUMBER: 60/090557 FILING DATE: 1998-06-24
                          APPLICATION NUMBER: FILING DATE: 1998-0
           APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N NUMBER: 60/0
E: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER: 60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                            : 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-17
                                                                                                                                                                                  NUMBER: 60/090535
                                                                                                                                                                                                                NUMBER: 60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-22
                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-23
                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                          1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-19
                                                                                                                                                                                                  1998-06-
                                                                                                                                                                                                                              1998-06-24
                                                                                                                                                                                                                                                          1998-06-24
                           1998-06-
-90-866
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/089653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/089907
                             60/090678
6-25
                                                                                                                                                                                                                                                                                                60/090435
                                                                                                                                                                                                                                                                                                                                                         60/090429
                                                                                                                                                                                                                                                                                                                                                                                        60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/089948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/089947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089908
                                                                                                                                                                                                                                             60/090445
                                                                       60/090676
```

```
Вþ
                                                                                                                                   Qγ
                         δÃ
                                                     Вþ
                                                                             QΥ
밁
                                                                                                                                                                  Query Match 99.3
Best Local Similarity 99.3
Matches 123; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                             OR APPLICATION NUMBER: 60/091360
OR FILING DATE: 1998-07-01
OR APPLICATION NUMBER: 60/091478
OR FILING DATE: 1998-07-02
OR APPLICATION NUMBER: 60/091544
OR APPLICATION NUMBER: 60/091519
OR APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
121
                           121 KYCV 124
                                                      61
                                                                                 61
                                                                                                          FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091978
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FIL1NG DATE:
                                                                                                                                                                                                                       APPLICATION NUMBER: 60/(FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/CFILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                      FILING DATE:
1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-
                                                                                                                                                                                                                                                                                                                                        1998-07-02
                                                                                                                                                                                99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090695
                                                                                                                                                                                                                                        60/092182
                                                                                                                                                                                                                                                                   60/091982
                                                                                                                                                                    0;
                                                                                                                                                                    Score 650; DB 9;
Pred. No. 3.2e-66;
D; Mismatches 1
                                                                                                                                                                                                 Length 124;
```

Gaps

```
RESULT 15
US-09-997-666-266
                                                                                                                                                                                                                                                                                                                          Sequence 266, Application US/09997666 Publication No. US20030027163A1
                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                              APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                APPLICANT:
APPLICANT:
                                     APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                 APPLICANT:
APPLICANT :
                                                                                                      APPLICANT
                                                                                                                     APPLICANT
                                                                                                                                   APPLICANT
                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                      APPLICANT
                          APPLICANT:
                                                                                                                                                                                                                                                                                    Ashkenazi, Avi J
Baker, Kevin P
                                                  Roy, Margaret Ann
Stewart, Timothy
                                                                                                                     Gurney, Austin J
Kljavin, Ivar J
                                                                                                                                                 Grimaldi, J.Christopher
                                                                                                                                                              Goddard, Audrey
Godowski, Paul
                                                                                                                                                                                          Gerber, Hanspeter
Gerritsen, Mary E.
                                                                                                                                                                                                                   Fong,Sherman
                                                                                                                                                                                                                                 Ferrara, Napoleone
                                                                                                                                                                                                                                               Eaton, Dan
                                                                                                                                                                                                                                                           Desnoyers,Luc
                                                                                                                                                                                                                                                                        Botstein, David
            Watanabe, Colin K. Williams, P. Mickey
                                                                                             Pan, James
                                                                                                       Napier, Mary A.
                                        Tumas,
                                                                           Paoni, Nicholas F.
                                        Daniel
```

```
US-09-997-428-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20
                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 123
                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION: APPLICANT: Ashkenaz.
                                                                                                                                                                                                                                                                                                                              Sequence 266, A Publication No.
            APPLICANT:
                                                                                        APPLICANT:
                                                                                                                  APPLICANT:
                                                                                                                                           APPLICANT:
                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                           APPLICANT:
APPLICANT:
                                                 APPLICANT
                                                                APPLICANT
                                    APPLICANT:
                                                                             APPLICANT
                                                                                                                                                                      APPLICANT
                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                     121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OR APPLICATION NUMBER: 607/91978
OR FILING DATE: 1998-07-07
OR APPLICATION NUMBER: 607/91982
OR FILING DATE: 1998-07-07
OR APPLICATION NUMBER: 607/092182
OR FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091633
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091544
FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                             KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAERGDILRKADSSTNIFNPRGNLRKFODFSGODPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGODPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090862 FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090695
FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090696
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                     Ashkenazi, Avi J.
Baker, Kevin P.
      Watanabe, Colin K. Williams, P. Mickey Wood, William I.
                                                       Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
                                             Stewart, Timo
                                                                                                   Pan,James
                                                                                                           Napier, Mary A.
                                                                                                                           Kljavin, Ivar J.
                                                                                                                                      Gurney,Austin_L.
                                                                                                                                                   Grimaldi,J.Christopher
                                                                                                                                                                   Godowski, Paul J.
                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                          Gerritsen, Mary E.
                                                                                                                                                                                                         Gerber, Hanspeter
                                                                                                                                                                                                                     Fong, Sherman
                                                                                                                                                                                                                                 Ferrara, Napoleone
                                                                                                                                                                                                                                              Eaton, Dan L.
                                                                                                                                                                                                                                                            Desnoyers, Luc
                                                                                                                                                                                                                                                                         Botstein, David
                                                                                                                                                                                                                                                                                                                          Application US/09997428 o. US20030027162A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 650;
Pred. No. 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 9;
3.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
PRIOR PRIOR
                    PRIOR
                                                                                           PRIOR
                                                                                                                                                                                                 PRIOR PRIOR
                                        PRIOR
                                                                                                                                            PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
PRIOR FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1997-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/997,428
CURRENT FILING DATE: 2001-11-15
                                APPLICATION NUMBER: 60//
FILING DATE: 1998-06-10
APPLICATION NUMBER: 60//
FILING DATE: 1998-06-10
 APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                        APPLICATION NUMBER: 60/088810 FILING DATE: 1998-06-10
                                                                                                                                                         APPLICATION NUMBER
                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088734
                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088655 FILING DATE: 1998-06-09
                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-05
                                                                                                                                                                                                              FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088217
                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/088202
FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088167
FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088033
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/088029
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic E OF INVENTION: Acids Encoding the Same REFERENCE: P2730P1C44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/
FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/065311
FILING DATE: 1997-11-13
APPLICATION NUMBER: 60/066770
FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/087609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/
FILING DATE: 1998-02-25
NUMBER: 60/088858
1998-06-11
                                                                                                    1998-06-10
                                                                                                                                        1998-06-10
                                                                                                                                                                                                                                                                                                                                                        1998-06-05
                                                                                                                                                                           1998-06-10
                                                                                                                                                                                                                                               1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1997-06-3
                                                 60/088826
                                                                                  60/088824
                                                                                                                                                       60/088742
                                                                                                                                                                                            60/088738
                                                                                                                                                                                                                                                                                                                                        60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/088030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/087827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/087759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/087607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/084600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/087106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/049787
```

PRIOR PRIOR

APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12

APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13

PRIOR PRIOR

PRIOR

APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: FILING DATE:

APPLICATION FILING DATE: FILING DATE:

NUMBER:

1998-06-02 1998-05-28 1998-05-07 1998-04-28 1998-03-20

APPLICATION NUMBER:

PRIOR PRIOR

APPLICATION FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE:

NUMBER:

1998-06-02 1998-06-02

APPLICATION NUMBER:

ILING DATE: [LING DATE:

LING DATE

NUMBER:

60/088026 60/088025 60/088021 60/087827 60/087759 60/087609 60/087607 60/087106 60/084600

1998-06-04 1998-06-04 1998-06-03

NUMBER: 60/088028

998-06-04 .998-06-04

APPLICATION NUMBER: 60/088030

APPLICATION NUMBER: FILING DATE:

60/088033

APPLICATION

NUMBER: 60/088326

NUMBER: 60/088167

LING DATE:

FIL1NG DATE:

APPLICATION | FILING DATE:

APPLICATION FILING DATE:

APPLICATION FILING DATE:

NUMBER:

60/088212 60/088202

FILING DATE:

1998-06-05 1998-06-05 1998-06-05 1998-06-05 1998-06-04 1998-06-04 1998-06-04

APPLICATION FILING DATE: APPLICATION

NUMBER:

APPLICATION

NUMBER: 60/088734 NUMBER: 60/088655 NUMBER: 60/088217

1998-06-09

1998-06-10

60/088738

FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088824
FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088826

FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088858

FILING DATE: APPLICATION

NUMBER:

60/088810

NUMBER: 60/088742 : 1998-06-10

1998-06-10

FILING DATE: APPLICATION APPLICATION NUMBER: FILING DATE: FILING DATE: FILING DATE APPLICATION

APPLICATION

NUMBER:

60/088029

1998-06-04

PRIOR PRIOR PRIOR PRIOR

PRIOR

FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1997-1

1998-02-25

60/078910 60/075945 60/066770

1997-11-24

APPLICATION NUMBER:

PRIOR

APPLICATION NUMBER: 60/083322

PRIOR PRIOR

PRIOR

PRIOR

FILING DATE:

1997-10-17

APPLICATION NUMBER: 60/062250

PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR SECTION NUMBER: 60/049787

CURRENT APPLICATION NUMBER: CURRENT FILING DATE: 2001-1

TITLE FILE R

: OF INVENTION: Acids REFERENCE: P2730P1C18

Encoding the Same

US/09/990,562

PRIOR RIOR PRIOR R APPLICATE: 1950
DR FILING DATE: 1950
OR APPLICATION NUMBER: 60/000
IOR FILING DATE: 1998-06-25
TOR FILING DATE: 1998-06-25
TOR TITLE TORK NUMBER: 60/090694
TORK TORK NUMBER: 1998-06-25 R FILING DATE: 1998-06-11
R APPLICATION NUMBER: 60/08
R FILING DATE: 1998-06-12
R APPLICATION NUMBER: 60/08
R FILING DATE: 1998-06-16 FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/088876 FILING DATE: APPLICATION FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-22 APPLICATION NUMBER: APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-18 FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-19 FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-24 FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-23 FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-22 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE APPLICATION NUMBER: APPLICATION FILING DATE: APPLICATION APPLICATION NUMBER: FILING DATE: APPLICATION FILING DATE: FILING DATE: FILING DATE: 1998-06-22 FILING DATE: APPLICATION APPLICATION FILING DATE: FILING DATE: FILING DATE: NUMBER: 60/089532 NUMBER: 60/ : 1998-06-24 NUMBER: 60/090445 NUMBER: NUMBER: NUMBER: NUMBER: NUMBER: 1998-06-17 1998-06-1998-06.-16 1998-06-17 1998-06-17 1998-06-1998-06-17 1998-06-17 1998-06-24 1998-06-23 1998-06-18 1998-06-24 1998-06-24 1998-06-24 1998-06-24 1998-06-24 1998-06-25 1998-06-24 1998-06-24 998-06-19 .998-06-19 998-06-18 60/089600 60/089598 60/089538 60/089514 60/089512 60/089440 60/089105 806680/09 60/089907 60/089599 60/090254 60/090252 60/090246 60/089948 60/089947 60/089801 60/089653 60/090431 60/090429 60/090355 60/090349 60/089952 60/090444 60/090435 60/090542 60/090540 60/090535 60/090472 60/090676 60/090557

```
PRIOR
                                                                                                                                                                    PRIOR PRIOR
                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OR APPLICATION NUMBER: 60/089948
OR FILING DATE: 1998-06-19
OR APPLICATION NUMBER: 60/089952
OR FILING DATE: 1998-06-19
OR APPLICATION NUMBER: 60/090246
OR FILING DATE: 1998-06-22
OR APPLICATION NUMBER: 60/090252
OR APPLICATION NUMBER: 60/090252
OR APPLICATION NUMBER: 60/090252
OR FILING DATE: 1998-06-22
                                                                                                                                          FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090676
                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-24
                                                APPLICATION NUMBER: 60/090690 FILING DATE: 1998-06-25
                                                                                       FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
FILING DATE: 1998-06
APPLICATION NUMBER:
                                     APPLICATION NUMBER:
                                                                                                                                                                                                                 APPLICATION NUMBER: 60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090355
FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/090429
FILING DATE: 1998-06-24
                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/090444 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
FILING DATE: 1998-0
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/089908
FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/089947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60 FILING DATE: 1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/089801 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/089538 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/089600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/089532 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/088876 FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60
                    1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-18
                                                                                                                                                                                                                                                                                                                                                  998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .998-06-16
60/090695
                                   60/090694
                                                                                                         60/090678
                                                                                                                                                                                                                                                                                                                                                                 60/090445
                                                                                                                                                                                                                                                                                           60/090535
                                                                                                                                                                                                                                                                                                                              60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/089907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/089599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089105
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-990-562-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                        Sequence 266, A Publication No.
           APPLICANT:
TITLE OF I
                                                                                               APPLICANT:
                                    APPLICANT:
                                                                                                                                                                                                                                                                         APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local
                                                      APPLICANT:
                                                                   APPLICANT:
                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Ashkenazi, Avi J.
                                                                                                                             APPLICANT
                                                                                                                                          APPLICANT:
                                                                                                                                                         APPLICANT
                                                                                                                                                                      APPLICANT
                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/091544
PRIOR FILING DATE: 1998-07-01
PRIOR APPLICATION NUMBER: 60/091519
PRIOR FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1998-07-01
PRIOR APPLICATION NUMBER: 60/091478
PRIOR FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION NUMBER: 60/090863 PRIOR FILING DATE: 1998-06-26 PRIOR APPLICATION NUMBER: 60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1998-06-25 PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091626
FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091633
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/090696
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAERGDILRKADSSTNIENFRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123;
          INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                            Godowski, Paul J.
Grimaldi, J.Christopher
Gurney, Austin L.
                                                Watanabe, Colin K.
Williams, P. Mickey
                                                                                          Roy, Margaret Ann
Stewart, Timothy A.
                                    Wood, William I.
                                                                                 Tumas,
                                                                                                                                                                   Kljavin, Ivar J.
                                                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                         Gerritsen, Mary
                                                                                                                         Paoni, Nicholas F.
                                                                                                                                         Pan, James
                                                                                                                                                   Napier, Mary A.
                                                                                                                                                                                                                                                         Gerber, Hanspeter
                                                                                                                                                                                                                                                                      Fong, Sherman
                                                                                                                                                                                                                                                                                     Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                     Eaton, Dan
                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                Botstein, David
                                                                                                                                                                                                                                                                                                                                            Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                      Application US/09990562 o. US20030027985A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                         2emin
                                                                              Daniel
Secreted and Transmembrane Polypeptides and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99.2%;
                                                                                                                                                                                                                                         m
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/092182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 650; DB 9;
Pred. No. 3.2e-66;
0; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                             RESULT 12
US-09-990-438-266
                                                                                                                                                                                                                                                                                                                                                                                                              뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local
                                                                                                                                                                                                                                                                                                                         Publication No. US20 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                   sequence 266, Apsilon No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                   APPLICANT:
           APPLICANT:
                                                                                                                                                                                                                                                                                                 APPLICANT: Ashkenazi, Avi J. APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
TITLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                         APPLICANT:
                                                  APPLICANT:
                                                                                                 APPLICANT:
                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                            APPLICANT:
                                      APPLICANT:
                                                              APPLICANT:
                                                                          APPLICANT
                                                                                      APPLICANT:
                                                                                                                                      APPLICANT:
                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                         APPLICANT:
                                                                                                               APPLICANT:
                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                              121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                      121
                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/092182 FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                              KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                             GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              al Similarity 99.1
123; Conservative
IT: Zhang, Z
INVENTION:
INVENTION:
                                                                                                                                                Gurney, Austin
Kljavin, Ivar i
                                                                                  Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                       Godowski, Paul J.
Grimaldi, J.Christopher
                                                                                                                                                                                                            Gerritsen, Mary E
                                                                                                                                                                                                                                                  Ferrara, Napoleone
                                 Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                 Goddard, Audrey
                                                                                                                                                                                                                         Gerber, Hanspeter
                                                                                                                                                                                                                                     Fong, Sherman
                                                                                                                                                                                                                                                                         Desnoyers, Luc
                                                                                                                                                                                                                                                                                      Botstein, David
                                                                                                              Paoni, Nicholas F.
                                                                                                                                                                                                                                                               Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DATE:
                                                                         Tumas,
                                                                                                                                    Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                     Application US/09990438 b. US20030027754A1
                                                                                                                           James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-07-01
                           Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-07-02
                                                                       Daniel
            Secreted and Transmembrane Polypeptides and Nucleic
 Acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.2%;
99.2%;
                                                                                                                                                  cų
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/091626
Encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 650; DB Pred. No. 3.2e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
 the
 Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 9;
1.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILE REFERENCE: P2730P1C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                      PRIOR PRIOR
                                                                                      PRIOR
                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                              PRIOR
                                                                                                   PRIOR
                                                                                                               PRIOR
                                                                                                                                      PRIOR
                                                                                                                                                    PRIOR
                                                                                                                                                              PRIOR
                                                                                                                                                                           PRIOR
                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                            PRIOR
  APPLICATION FILING DATE:
```

PRIOR FILING DATE: 1997-11-12 PRIOR APPLICATION NUMBER: 60/065186 PRIOR FILING DATE: PRIOR APPLICATION NUMBER: PRIOR FILING DATE: PRIOR APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: 60/083322 FILING DATE: 1998-04-28 FILING DATE: 1998-03-20 APPLICATION NUMBER: 60/078910 FILING DATE: FILING DATE: 1997-11-24 APPLICATION NUMBER: 60/066770 FILING DATE: APPLICATION NUMBER: 60/065311 APPLICATION NUMBER: 60/087607 APPLICATION NUMBER: 60/084600 APPLICATION NUMBER: 60/075945 FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-06 APPLICATION NUMBER: APPLICATION NUMBER: 60/088029 FILING DATE: FILING DATE: 1998-00 APPLICATION NUMBER: APPLICATION NUMBER: 60/088026 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04 FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: 60/087609 FILING DATE: 1998-06-02 FILING DATE: FILING DATE: APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-10 FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-05 APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE; APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-06-1 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: US/0 FILING DATE: 2001-11-14 1997-06-16 1998-06-04 1998-06-04 1998-06-02 1998-05-07 1998-06-04 1998-06-04 1998-06-04 1998-06-04 1998-06-04 1998-06-02 1998-06-09 1998-06-05 1998-06-05 1998-06-03 1998-05-28 1998-02-1997-10-17 1998-06-10 1998-06-10 1998-06-10 1998-06-05 1998-06-10 1998-06-10 60/049787 60/088202 60/088033 60/088030 60/088025 60/088021 60/087827 60/087759 60/087106 60/062250 60/088212 60/088167 60/088028 60/088326 60/088858 60/088826 60/088824 60/088810 60/088742 60/088738 60/088734 60/088655 60/088217 US/09/990,438

0 20 20 20 20 20 20 20 20 20 20 20 20 20		000000000	PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR	PRIOR	PRIOR A
PRIOR F PRIOR A PRIOR F PRIOR F PRIOR A PRIOR F PRIOR A	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~	**************************************	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		
FILING D APPLICAT FILING D APPLICAT FILING D APPLICAT FILING D APPLICAT	FILING APPLICA FILING FILING APPLICA A	APPLICA FILING APPLICA FILING APPLICA FILING APPLICA APPLICA	APPLICA FILING APPLICA FILING FILING FILING FILING APPLICA FILING FILING FILING FILING APPLICA FILING APPLICA FILING APPLICA FILING	APPLICA APPLIC	FILING FILING APPLIC AP
FILING DATE: 1998-06-1 APPLICATION NUMBER: 60 FILING DATE: 1998-06-1 APPLICATION NUMBER: 60, APPLICATION NUMBER: 60, FILING DATE: 1998-06-1 APPLICATION NUMBER: 60, APPLICATION NUMBER: 60, APPLICATION NUMBER: 60, APPLICAT	APPLICATION NUMBER: 60/APPLICATION NUMBER: 60	R APPLICATION NUMBER: 60/0 R FILING DATE: 1998-06-05 R APPLICATION NUMBER: 60/0 R FILING DATE: 1998-06-05 R FILING DATE: 1998-06-05 R FILING DATE: 1998-06-05 R APPLICATION NUMBER: 60/0 R APPLICATION NUMBER: 60/0 R FILING DATE: 1998-06-09 R APPLICATION NUMBER: 60/0 R FILING DATE: 1998-06-09 R APPLICATION NUMBER: 60/0 R FILING DATE: 1998-06-09	APPLICATION NUMBER: FILING DATE: 1999-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:	APPLICATION FILING DATE:	R APPLICATION NUMBER: 60/049787 R FILING DATE: 1997-06-16 R APPLICATION NUMBER: 60/062250 R APPLICATION NUMBER: 60/065186 R FILING DATE: 1997-11-12 R APPLICATION NUMBER: 60/065311 R APPLICATION NUMBER: 60/065311 R APPLICATION NUMBER: 60/06670 R FILING DATE: 1997-11-24 R APPLICATION NUMBER: 60/075945 R APPLICATION NUMBER: 60/075945 R FILING DATE: 1998-02-25 R FILING DATE: 1998-03-20 R FILING DATE: 1998-03-20 R APPLICATION NUMBER: 60/078910 R APPLICATION NUMBER: 60/083322 R FILING DATE: 1998-03-20 R APPLICATION NUMBER: 60/084600 R APPLICATION NUMBER: 60/087106
N NUMBER: 1998-06 N NUMBER: N 1998-06 N NUMBER: 1998-06 N NUMBER: 1998-06 N NUMBER: 1998-06	DATE: 1998-00 ATION NUMBER: DATE: 1998-00 ATION NUMBER: DATE: 1998-00 ATION NUMBER: ATION NUMBER: DATE: 1998-00	N NUM N NUM N NUM N NUM N N N N N N N N	N NUMBER: E: 1998-0	E N E N E N E N E N E N E N E N E N E N	E: 1998 E: 199
1 1998-06- 2 NUMBER: 6 2 1998-06- 2 1998-06- 3 NUMBER: 6 3 NUMBER: 6 4 NUMBER: 6 4 NUMBER: 6	98-06 98-06 98-06 98-06	NUMBER: 60/ 1998-06-05 1998-06-05 1998-06-05 NUMBER: 60/ 1998-06-05 1998-06-09 1998-06-09	NUMBER: 60/ 1 1998-06-04 NUMBER: 60/ 1 1998-06-04 NUMBER: 60/ 1 1998-06-04 NUMBER: 60/ NUMBER: 60/ 1 1998-06-04 NUMBER: 60/ NUMBER: 60-04 NUMBER: 60-04 NUMBER: 60-04	N NUMBER: 60,2 E: 1998-06-02 R: 1998-06-02 E: 1998-06-02 N NUMBER: 60,2 N NUMBER: 60,2 N NUMBER: 60,2 N NUMBER: 60,4 E: 1998-06-04 E: 1998-06-04 N NUMBER: 60,4 E: 1998-06-04 N NUMBER: 60,4 R: 1998-06-04	N NUMBER: 66 E: 1997-06- N NUMBER: 61 E: 1997-10-1 N NUMBER: 61 E: 1997-11-1 N NUMBER: 60 E: 1997-11-1 N NUMBER: 60 E: 1997-11-2 N NUMBER: 60 E: 1998-03-2 N NUMBER: 60 E: 1998-03-2 N NUMBER: 60 E: 1998-03-2 NUMBER: 60 E: 1998-05-04 NUMBER: 60 NUMBER: 60
98 86		60/08 60/08 60/08 60/08 60/08	60/088028 6-04 6-04 6-04 6-04 60/088030 6-04 6-04 6-04 6-04 60/08833 6-04 6-04 6-04 6-04 6-04	NN NUMBER: 60/087607 NN NUMBER: 60/087609 NN NUMBER: 60/087609 NN NUMBER: 60/087759 NN NUMBER: 60/087827 NN 1198-06-02 NN NUMBER: 60/088021 NN NUMBER: 60/088025	60/049787 6-16 6-16/062250 0-17/062250 0-17/0655186 1-12/065311 1-13 1-24 1-24 1-24 1-24 1-24 1-24 1-24 1-24
188826 188858 188861	00000000000000000000000000000000000000	7088202 5 7088212 5 7088217 5 708855 9	7088028 4 7088029 4 7088030 7088033 7088326 7088167	0087607 2 2087609 2 2 2 2 2087759 2 2087827 3 3 4 4 4 4 1088025 4 4 4 4 4 4 1088026	60/049787 60/065250 917 117 117 118 60/065186 60/065311 113 60/06570 124 60/075945 60/075945 60/083322 128 60/083322 129 120 120 120 120 120 120 120 120
					•
					·
PRI PRI PRI PRI PRI	PRI PRI PRI PRI PRI PRI PRI PRI PRI	PRI PRI PRI PRI PRI PRI PRI	PR PR.	PR	אק ק
י ש כ ש כ ש כ ש י				PRIOR	
FILI APPL FILI APPL FILI APPL APPL	APPL APPL APPL FILI APPL FILI APPL		APP FIL APP FIL APP FIL APP FIL APP	PRIOR APPLI PRIOR PILIN PRIOR FILIN PRIOR FILIN PRIOR FILIN PRIOR PILIN PRIOR PILIN PRIOR APPLI PRIOR APPLI PRIOR APPLI PRIOR APPLI PRIOR APPLI PRIOR APPLI PRIOR PILIN PRIOR PILIN PRIOR PILIN PRIOR PILIN PRIOR PILIN PRIOR PILIN	FILL APPP FILL APP FILL APPP FILL APPP FILL APPP FILL APPP FILL APPP FILL APP FILL APPP FILL APPP FILL APP FILL APP FILL APP FILL APP FILL APP FIL
FILI APPL FILI APPL FILI APPL APPL	APPL APPL APPL FILI APPL FILI APPL		APP FIL APP FIL APP FIL APP FIL APP	PRIOR APPLICATION PRIOR PILING DAY PRIOR FILING DAY PRIOR FILING DAY PRIOR FILING DAY PRIOR PRIOR APPLICATION PRIOR APPLICATION PRIOR PRIOR APPLICATION PRIOR FILING DAY PRIOR FILING DAY PRIOR PRIOR PRICATION PRIOR PRIOR PRICATION PRIOR PRIOR PRICATION PRIOR PRIOR PRICATION PRIOR PRIOR FILING DAY PRIOR FILING DAY PRIOR FILING DAY	FILL APPP FILL APP FILL APPP FILL APPP FILL APPP FILL APPP FILL APPP FILL APP FILL APPP FILL APPP FILL APP FILL APP FILL APP FILL APP FILL APP FIL
FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION APPLICATION FILING DATE: APPLICATION	APPL APPL APPL FILI APPL FILI APPL		APP FIL APP FIL APP FIL APP FIL APP	APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION APPLICATION FILING DATE APPLICATION APPLICATION FILING DATE APPLICATION APPLICATION APPLICATION	FILING DATE: APPLICATION FILING DATE:
FILING DATE: 199 APPLICATION NUME FILING DATE: 199 FILING DATE: 199 ENTER DATE: 199 FILING DATE: 199 FILING DATE: 199 FILING DATE: 199 APPLICATION NUME FILING TONE NUME FILING TONE NUME FILING TONE NUME APPLICATION NUME	APPL APPL APPL FILI APPL FILI APPL		APP FIL APP FIL APP FIL APP FIL APP	APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION FILING DATE APPLICATION APPLICATION FILING DATE APPLICATION APPLICATION FILING DATE APPLICATION APPLICATION APPLICATION	FILING DATE: APPLICATION FILING DATE:
FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:	APPL APPL APPL FILI APPL FILI APPL		APPLICATION NUMBER: 60, FILING DATE: 1998-06-22 APPLICATION NUMBER: 60, FILING DATE: 1998-06-24	APPLICATION NUMBER: FILING DATE: 1998-0	FILING DATE: APPLICATION FILING DATE:
ING DATE: 1998-0, LICATION NUMBER:	APPL APPL APPL FILI APPL FILI APPL		APP FIL APP FIL APP FIL APP FIL APP	FINAL AREAS	ETLING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0

PRIOR PRIOR

APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-18

60/089907

FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER:

1998-06-17

60/089801 60/089653

PRIOR

APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: 1998-06-18 APPLICATION NUMBER:

1998-06-18

60/089908

FILING DATE:

998-06-19

60/090246 60/089952 60/089948

1998-06-19

APPLICATION NUMBER: 60/090349

1998-06-22

1998-06-23

APPLICATION NUMBER: 60/090355

1998-06-23

LING DATE:

APPLICATION NUMBER: 60/090429

FILING DATE: FILING DATE:

NUMBER:

60/090431

1998-06-24

1998-06-24

FILING DATE: APPLICATION

FILING DATE:

APPLICATION NUMBER: FILING DATE: 1998-06

1998-06-1998-06-24

60/090676 60/090557

APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-

60/090694 6-25 60/090690

APPLICATION NUMBER: 60/090695 FILING DATE: 1998-06-25

FILING DATE:

APPLICATION NUMBER: 60/090678

1998-06-1998-06-25 1998-06-25

FILING DATE: APPLICATION NUMBER:

APPLICATION NUMBER:

FILING DATE:

APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24

APPLICATION NUMBER: 60/090542

FILING DATE:

1998-06-24

APPLICATION NUMBER: 60/090472 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090445

APPLICATION NUMBER: 60/090535

FILING DATE:

FILING DATE:

1998-06-24 1998-06-24 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090435

APPLICATION NUMBER: 60/090444

APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE:

APPLICATION NUMBER: 60/090252 APPLICATION NUMBER: 60 FILING DATE: 1998-06-APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-08 FILING DATE: 1998-06-19 APPLICATION NUMBER: 60/089947

1998-06-22

60/090254

PRIOR

PRIOR

FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: APPLICATION NUMBER: FILING DATE:

1998-06-

1998-06-17 1998-06-16

60/089538

60/089532 60/089514 APPLICATION NUMBER: 60/089512 FILING DATE: 1998-06-16

1998-06-16

APPLICATION FILING DATE:

NUMBER:

60/089105

1998-06-3

60/089440

APPLICATION NUMBER:

PRIOR PRIOR

APPLICATION NUMBER:

: 1998-06-17

1998-06-17

60/089600

1998-06-17

FILING DATE: FILING DATE: APPLICATION NUMBER:

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ω
                                                                                                                                                                                                                                                                                                                                                                                US-09-993-667-266
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                      sequence 266, Ap
publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                 APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                            APPLICANT: Ashkenazi, Avi J
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C4
                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                               APPLICANT:
                                     APPLICANT:
                                                                                                                                                  APPLICANT:
                                                                                                                                                              APPLICANT:
                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                       APPLICANT:
                                                            APPLICANT
                                                                                    APPLICANT:
                                                                                                                          APPLICANT:
                                                                                                                                       APPLICANT:
                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01 APPLICATION NUMBER: 60/091478 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090862 FILING DATE: 1998-06-26 APPLICATION NUMBER: 60/090863 FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091519 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                               KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                        KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                         Gerritsen, Mary E.
                                                                                                                                                                                                                                       Gerber, Hanspeter
                                                                                                                                                                                                                                                    Fong,Sherman
                                                                                                                                                                                                                                                                 Ferrara, Napoleone
                                                                                                                                                                                                                                                                                           Desnoyers,Luc
                                                                                                                                                                                                                                                                                                     Baker, Kevin P.
Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DATE:
                                                                                                                                                                           Gurney, Austin L.
                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                              Eaton, Dan L
                                                                                                                                                                                         Grimaldi,J.Christopher
                                                                                                                                                                                                  Godowski,Paul
                                                                                                                                                                                                                                                                                                                                                                Application US/09993667
                                                             Watanabe, Colin K.
Williams, P. Mickey
                                                                                                 Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                Kljavin, Ivar
                                               wood, William
                                                                                      Tumas, Daniel
                                                                                                                          Paoni, Nicholas F
                                                                                                                                        Pan,James
                                                                                                                                                  Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                      US20030022187A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER: 60/092182
: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-07-02
                                      Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99.2%;
                                                                                                                                                                ч
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/091978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 650; DB 9;
Pred. No. 3.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                              Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
```

0;

```
RESULT 10
US-09-997-653-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Ashkenaz
                                                                                                                                                                                                                                                                                                                                                                        Sequence 266, Application US/09997653 Publication No. US20030008297A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity 99.2
The 123; Conservative
     TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C38
                                                                                APPLICANT:
                                                                                                                                                APPLICANT:
CURRENT APPLICATION NUMBER: US/09/997,653
                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                      APPLICANT:
                                                                      APPLICANT:
                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/092182 FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/091633
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/091978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091626 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090863 FILING DATE: 1998-06-26 APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                         KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090862
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                  Ashkenazi, Avi J.
                                                                Watanabe, Colin K. Williams, P. Mickey Wood, William I.
                                                                                                      Tumas, Daniel
                                                                                                                Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                             Gurney, Austin L.
                                                                                                                                                                                                         Grimaldi, J. Christopher
                                                                                                                                                                                                                       Goddard, Audrey
Godowski, Paul J.
                                                                                                                                             Paoni, Nicholas F.
                                                                                                                                                                   Napier, Mary A.
                                                                                                                                                                                 Kljavin, Ivar J.
                                                                                                                                                                                                                                              Gerritsen, Mary E.
                                                                                                                                                                                                                                                             Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                        Baker, Kevin p.
Botstein, David
                                                                                                                                                                                                                                                                           Fong,
                                                                                                                                                                                                                                                                                   Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                Eaton, Dan L.
                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                                                                                        ,Sherman
                                                      Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 650; DB 9;
Pred. No. 3.2e-66;
0; Mlsmatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                                          PRIOR
                                                                                                         PRIOR
                                                                                             PRIOR
                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                  PRIOR
```

PRIOR APPLICATION NUMBER: 60/088028 PRIOR APPLICATION NUMBER: 60/087607 PRIOR FILING DATE: 1998-06-02 PRIOR APPLICATION NUMBER: 60/087609 PRIOR FILING DATE: 1998-04-28
PRIOR APPLICATION NUMBER: 60/ PRIOR FILING DATE: 1998-02-25 PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 1998-03-20 PRIOR APPLICATION NUMBER: PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-06-16 PRIOR APPLICATION NUMBER: 60/062250 PRIOR FILING DATE: 1997-10-17 PRIOR APPLICATION NUMBER: 60/066770 PRIOR FILING DATE: 1997-11-24 PRIOR APPLICATION NUMBER: 60/065311 PRIOR FILING DATE: 1997-11-13 PRIOR APPLICATION NUMBER: 60/065186 PRIOR FILING DATE: 1997-11-12 PRIOR APPLICATION NUMBER: CURRENT FILING DATE: DR APPLICATION NUMBER: 60/088858
DR FILING DATE: 1998-06-11
DR APPLICATION NUMBER: 60/088861
DR FILING DATE: 1998-06-11
DR APPLICATION NUMBER: 60/088876
DR FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088810 FILING DATE: 1998-06-10 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088742 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088217 FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088212 FILING DATE: 1998-06-05 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088655 FILING DATE: 1998-06-09 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04 APPLICATION NUMBER: APPLICATION NUMBER: 60/088326 APPLICATION NUMBER: 60/088033 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/087759 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087827 FILING DATE: 1998-06-03 FILING DATE: 1998-06-04 FILING DATE: FILING DATE: FILING DATE: APPLICATION NUMBER: 60/088029 APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04 FILING DATE: 1998-06-04 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07 APPLICATION NUMBER: FILING DATE: 1998-0: FILING DATE: 1998-05-28 1998-06-11 1998-06-09 1998-06-04 1998-06-04 1998-06-02 1998-06-04 2001-11-15 60/088738 60/088824 60/088734 60/088202 60/088167 60/088030 60/088021 60/087106 60/088025 60/083322 60/078910 60/075945

																																												Ų	′													
-			-			-	-	-																-										_									-			•			٠							-		
																										_																		_					_	_		_	_	_		_		_
	•••		٠.	•••		٠.	٠.			٠.	٠.	٠.				٠.	٠. ٠		٠	٠.	٠.	٠.				٠.	٠.	٠.	٠. ٠				٠.	٠.	٠.			٠.	٠. ٠			٠.	٠. ٠	٠		٠.	•		٠.	٠.	٠. ،			٠. ٠		٠.	٠. ٠	
ד	PRIO	ק ק	PR	PRIO	D K L	PR	PR	PR	י גע	PR	PR	PR	PR :	י גע	PR	PR	PR :	R ;	֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓֓	PR	PR	PR	PR	PR :	ב כ	PR	PR	PR	PR	PR :	PR	ק ק	יי נ ג	PR	PR	PR	בי ט	PR	PR	י א ^י	י ט ג	PR	PR	י צי	בר בר בר בר	PR	PR	ים גע	פינ	PR	PR	ידים גינג	קי קי	PR:	יי דע	PR	PR	D PR
T C R	IOR	IOR	IOR	IOR	I CR	IOR	IOR	IOR	Z Z	SIS	IOR	IOR	IOR	Į,	IOR	IOR	IOR	TOR !	Z E	IOR	IOR	IOR	IOR	TOR		IOR	IOR	IOR	IOR	IOR	IOR	I S	IOR	IOR	IOR	IOR S		IOR	IOR	IOR	Z E	IOR	IOR	i o		IOR	IOR	TOR	IOR	IOR	IOR	T CK	IOR	IOR	TOR S	PRIOR	IOR	IOR
1 <u>4</u>	AP	FA	FI	'nι	ŦΑ				2 7	A F	FI	ΑĘ		> 7	7 P	FI	ΑP	Ŧ ?	7	Į A	-	7				FI	ΑP	FΙ	ΑP	Ŧ;	ΑP	Ŧ	, F	ΑP	FI	ΑP	η A	Ή	ΑP	FΙ) T	ΑP	FI	ΑP	ηAΡ	FI	ΑP				দা :	7 4	על ה	FI	A T	ΑP	FI	ÞΕ
- Z	PPLIC	TLING	TLI NG	PPLI	TLING	TLING	APPLIC.	I I	PLIC	PLIC	LING	PPLIC	FILING	ADDITO	PLI	z	FLI	I I I	ADDITO	PLI	LING	\PPLIC.	LIN	APPLIC	7 7 1	FILING	PLI	LIN	PLI	LIZ	PLI	ZIN	LLN	PLI	NIT	PLI	PLI	LIN	PLI	LHZ		LTd	LIN	PLI	PLI	LIN	APPLICA		FILING	APPLIC	ILING	PPI.TC	PPLI	LIN	PLIC	PLI	ĤГ	LING
		7		➣	\sim			- 7	>	CAT	D D	ď	. h) G	CATIO	D D	CAT	ב ב	3 6	CAT	G D	CAT	0) (, CA	0	CAT	G D	CAT	0 5	CAT	G A	, G	CAT	o D	CAT	CAT	GD	CAT	G 2	ם מיני	CAT	G D	CAT	CAT	מ	CAT	a CA			•			D 2	4	704	ь:	7 -
DATE	S.	DATE	DATE	Z t	DATE	DATE	ATION	DATE	TALE	ATION	DATE	ATION	m z	ζŗ	NOI	ATE	ATION	ATE	ATE	NOI	ATE	NOI	ATE			DATE	NOI	ATE	NOI	ATE	NOI	ATE	ATE	APPLICATION	ATE	NOI	NOI	ATE	NOI	ATE	A TE	NOI	ATE	NON	NOI	FILING DATE:	NOI	DATE	DATE	TION	DATE	DATE	12	DATE	ION	TION	ATE	ATE
-	NUMB	. 199	: 19	z	· 199	: 19	~	. 199	 T T	$\overline{}$. 1	NUMB	: 199	 	N	٠.	NUMBER: 6	_ 2	 -	N	. 1	N.	_ 5		N		NG	 	S.	 1	Z .	_ 2	 -	NG		N.			N.	 {	 -	N.	 ;	 E	. 2		Z .				: 199			1	 N H	NUMBI	: 199	 <u>1</u> 1
α	E (30 FJ	œ	BE	æπ	1 00	E '	φþ	ŋα	o 🖽	æ	TI.	α Γ	100	MBE	998	MBE	8000	866	MBE	866	MBE	866	MAH	MBE	866	MBE	998	MBE	998	MBE	866 986	866	NUMBER	998	MBE	MBE	866	NUMBER	866	866	MBE	: 1998-(MBE	MBE	: 1998-0	MBE	NUMBER	-866	MBE	-866	358 266	UMBER	: 1998-	25 A M	MBE	866 39M	998 866
90-	, ₍	- R:	90	6	- R	90	:: ;	-06	٠ ٥	? ::	90	•	-06	. 6	χ Υ	-06	æ ;	-06	906	, 	-06	₽ ;	-06 ?:	. 6	,	-06	R:	-06	₽ (-06	6	- X	6		8	~ ~	Ď	9	5	≃.	. 6		8.	· a	ž	9	5	₹	96	•••	90	. 6	· · ·	90	. 6	S	-06	
2.5	_ <	- 50/	25		- 50/	25	60/	-25	2 4	§	24	Ϋ,	4		્ટ	24	٥:	2 2	2 2	? ?	24	<u></u> ق	24	? °	Š	23	õ	23.	٥̈́١	2	, ç	ÿŠ	22	9	-19	709 T	200	-19	60	-18	81.	709	-18	90/	709	-17	65;	-17	-17	9	ソ	-17	709	-16	-16	709	-16	-12
	090696	69060		09069	090))	09067	0900		0905		0905	90	2000	0905		0904	9		0904		0904	- 0	0001	0904	,	0903		0903	0	0902	7060		0902		6680,	6680		08994	00000	0 0 0	06680,	9	08980	9680,		9680	9680	; ;	089	0	080	680	a	089	680	9	9
	696	695		694	0690	•	678	0/0	J	557		542		л Э	535		472	4	<u>.</u>	444		435	Ĺ	21	429	1	355		349	- (254	7.5.7	1	246		952	948		947	9		907	9	801	653		009	599	>	598	ļ	ار در	532	b I C	л .	512	44	_
																																								_										-							-	

PRIOR PRIOR

FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088810 FILING DATE: 1998-06-10

OR APPLICATION NUMBER: 60/088217
OR FILING DATE: 1998-06-05
OR FILING DATE: 1998-06-09
OR APPLICATION NUMBER: 60/088655
OR FILING DATE: 1998-06-09
OR APPLICATION NUMBER: 60/088734
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088738
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088742
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088742
OR FILING DATE: 1998-06-10

PRIOR PRIOR PRIOR PRIOR

OR APPLICATION NUMBER: 60/088326
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088167
OR FILING DATE: 1998-06-05
OR APPLICATION NUMBER: 60/088202
OR FILING DATE: 1998-06-05
OR APPLICATION NUMBER: 60/088212
OR FILING DATE: 1998-06-05
OR FILING DATE: 1998-06-05

PRIOR

PRIOR

APPLICATION NUMBER: 60/088030 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088033 FILING DATE: 1998-06-04

PRIOR PRIOR

DR APPLICATION NUMBER: 60/087827
DR FILING DATE: 1998-06-03
DR FILING DATE: 1998-06-04
DR FILING DATE: 1998-06-04
DR APPLICATION NUMBER: 60/088025
DR FILING DATE: 1998-06-04
DR APPLICATION NUMBER: 60/088026
DR FILING DATE: 1998-06-04
DR APPLICATION NUMBER: 60/088026
DR APPLICATION NUMBER: 60/088028

PRIOR

PRIOR

FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088029
FILING DATE: 1998-06-04

PRIOR PRIOR

APPLICATION NUMBER: 60/087607 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087106 FILING DATE: 1998-05-28

PRIOR

APPLICATION NUMBER: 60/087609 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087759 FILING DATE: 1998-06-02

PRIOR PRIOR

APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20 APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25

APPLICATION NUMBER: 60/083322 FILING DATE: 1998-04-28 APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07

PRIOR

APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13 APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24

APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12 APPLICATION NUMBER: 60/062250 FILING DATE: 1997-10-17 APPLICATION NUMBER: 60/049787 FILING DATE: 1997-06-16

PRIOR PRIOR PRIOR PRIOR

OR APPLICATION NUMBER: 60/088824
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088826
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088858
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/088861
OR APPLICATION NUMBER: 60/088876
OR APPLICATION NUMBER: 60/088876

PRIOR PRIOR

N NUMBER: 60/(3: 1998-06-11

60/089105

```
PRIOR PRIOR
                                                                                                                              PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                  PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                   DR FILING DATE: 1998-06-24

R APPLICATION NUMBER: 60/090431

DR FILING DATE: 1998-06-24

DR APPLICATION NUMBER: 60/090435

DR FILING DATE: 1998-06-24

DR APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/090355
FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090252
FILING DATE: 1998-06-22
APPLICATION NUMBER: 60/090254
FILING DATE: 1998-06-22
APPLICATION NUMBER: 60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-19
APPLICATION NUMBER: 60/089948
                                                                                                                                                                                                                                 FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/090472 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090535
                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090246
FILING DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/089952
FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/
FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/089907 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                             APPLICATION NUMBER: 60/090695
FILING DATE: 1998-06-25
                                                                                              APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                               FILING DATE: 1998-06-25
                                                                            APPLICATION NUMBER:
                                                                                                                                FILING DATE: 1998-06-25
                                                                                                                                                               APPLICATION NUMBER: 60/090676 FILING DATE: 1998-06-25
                                                                                                                                                                                                 FILING DATE: 1998-06-24
                                                                                                                                                                                                                  APPLICATION NUMBER:
             APPLICATION NUMBER: 60/090696
                                                                                                                                               APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    : 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER: 60/089801
1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-16
                                                                                               1998-06-25
-90-8661
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           80/089908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/089598
                                                                              60/090694
                                                                                                               60/090690
                                                                                                                                                                                                                  60/090557
                                                                                                                                                                                                                                                  60/090542
                                                                                                                                                                                                                                                                                                                                                                                      60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/089947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/089600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/089599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/089653
```

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 9
US-09-989-734-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Б
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 266, Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                 APPLICANT:
APPLICANT:
APPLICANT:
                                                                                      APPLICANT:
                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR PRIOR
CURRENT APPLICATION NUMBER: US/09/989,734
CURRENT FILING DATE: 2001-11-19
                TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1664 CURRENT APPLICATION NUMBER: US/09/989,734
                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/091478
PRIOR FILING DATE: 1998-07-02
                                                                          APPLICANT:
                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local. Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091544
FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090863
FILIA DATE: 1998-06-26
APPLICATION NUMBER: 60/091360
FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091633 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/092182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/091626 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAERGDILRKADSSTNIFNPRGNLRKFQDESGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MYKLASCCLLFTGFLNPLLSLPLLDSREISFOLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          123;
                                                                                                                                                                                                                                                                                                                                                                                                 Ashkenazi, Avi J
Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                  Watanabe, Colin K. Williams, P. Mickey
                                                                          Zhang, Zemin
                                                                                      Wood, William I.
                                                                                                                                  Tumas, Daniel
                                                                                                                                                Stewart,
                                                                                                                                                                                                                       Gurney, Austin L.
Kljavin, Ivar J.
                                                                                                                                                                                                                                                   Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                Gerritsen, Mary
                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                            Fong, Sherman
                                                                                                                                                                                                                                                                                                                                          Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
                                                                                                                                                                          Paoni, Nicholas F
                                                                                                                                                                                           Pan, James
                                                                                                                                                                                                                                                                    Godowski, Paul J
                                                                                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                        Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                     Botstein, David
                                                                                                                                                                                                        Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09989734 o. US20030003531A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                             Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-26
                                                                                                                Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 650;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       o
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          w
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-993-687-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 266, Application US/09993687 Publication No. US20020198149A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                     APPLICANT:
APPLICANT:
FILE REFERENCE: P2730P1C11
CURRENT APPLICATION NUMBER: US/09/993,687
CURRENT FILING DATE: 2002-11-14
PRIOR APPLICATION NUMBER: 60/049787
                                       TITLE OF INVENTION: Secreted and Transmembrane Polypeptides TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                   APPLICANT:
                                                                                                                                  APPLICANT:
                                                                                                                                                               APPLICANT
                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                APPLICANT:
                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091982
FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091633 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/091626 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091519 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/091478 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                             Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                               Baker, Kevin P.
Botstein, David
                                                                                                                                                            Stewart,
                                                                                     Zhang,
                                                                                                   Wood, William
                                                                                                                Watanabe, Colin K.
Williams, P. Mickey
                                                                                                                                                Tumas,
                                                                                                                                                                                                                   Kljavin, Ivar J.
Napier, Mary A.
                                                                                                                                                                                                                                                 Gurney, Austin L.
                                                                                                                                                                                                                                                             Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                              Godowski, Paul
                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                         Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                          Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                       Fon9
                                                                                                                                                                                                                                                                                                                                                   Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                    Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
                                                                                                                                                                                        Paoni, Nicholas F.
                                                                                                                                                                                                         Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                         Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER: 60/
: 1998-06-26
                                                                                       Zemin
                                                                                                                                              Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      99.2%;
                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      650; DB 9;
No. 3.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                     and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0,
```

PRIOR APPLICATION NUMBER: 60/065311 PRIOR FILING DATE: PRIOR APPLICATION NUMBER: 60/062250 PRIOR FILING DATE: 1997-06-16 R FILING DATE:
R APPLICATION N
R FILING DATE: FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088029 FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088028 FILING DATE: 1998-06 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: 60/088167 FILING DATE: 1998-06-05 FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/088030 FILING DATE: FILING DATE: 1998-06-03 APPLICATION NUMBER: 60/088021 FILING DATE: 1998-08 APPLICATION NUMBER: FILING DATE: 1998-05-28 APPLICATION NUMBER: 60/087607 FILING DATE: 1998-04 APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: 60/083322 APPLICATION NUMBER: 60/075945 FILING DATE: FILING DATE: FILING DATE: FILING DATE: APPLICATION NUMBER: 60/078910 FILING DATE: FILING DATE: APPLICATION NUMBER: 60/066770 FILING DATE: APPLICATION NUMBER: 60/065186 NUMBER: 1998-06-11 NUMBER: 60/088810 1998-06-10 1998-06-10 1997-11-1 1998-06-11 1998-06-11 1998-06-10 1998-06-10 1998-06-09 1998-06-04 1997-11-1 IUMBER: 60/088734 1998-06-10 1998-06-05 1998-06-05 1998-06-05 1998-06-02 1998-06-02 1998-06-02 1998-04-28 1998-02-25 1997-10-17 1998-05-07 1998-03-1997-11-24 JMBER: 60/088033 1998-06-04 .998-06-10 1998-06-04 1998-06-04 1998-06-04 1998-06-04 60/088202 60/088876 60/088861 60/088858 60/088826 60/088742 60/088655 60/088217 60/088212 60/088326 60/088026 60/088025 60/087827 60/084600 60/089105 60/088738 60/087759 60/087609 60/087106

PRIOR	PRIOR	PRIOR	PRIOR
FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION APPLICATION	APPLICATION APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION FILING DATE: APPLICATION	APPLICATION EILING DATE APPLICATION FILING DATE FILING DATE FILING DATE APPLICATION	APPLICATION FILING DATE: APPLICATION APPLI
NUMBER: 66-198-06-1998-06-1	NUMBER: 60/0 1998-06-24 NUMBER: 60/0 1998-06-24 NUMBER: 60/0 1998-06-24 NUMBER: 60/0 1998-06-24 NUMBER: 60/0 1998-06-24 NUMBER: 60/0 1998-06-24 NUMBER: 60/0 1998-06-25 NUMBER: 60/0	NUMBER: 60/ 198-06-29 NUMBER: 60/ 198-06-22 NUMBER: 60/ 198-06-22 NUMBER: 60/ 198-06-23 NUMBER: 60/ 198-06-23 NUMBER: 60/ 198-06-24 NUMBER: 60/ 198-06-24 NUMBER: 60/ 198-06-24 NUMBER: 60/ 198-06-24 NUMBER: 60/ 198-06-24	NUMBER: 60/ 1998-06-16 NUMBER: 60/ 1998-06-17 NUMBER: 60/ 1998-06-17 NUMBER: 60/ 1998-06-17 NUMBER: 60/ 1998-06-17 NUMBER: 60/ 1998-06-17 NUMBER: 60/ 1998-06-18 NUMBER: 60/ 1998-06-18 NUMBER: 60/ 1998-06-18 NUMBER: 60/ 1998-06-18 NUMBER: 60/ 1998-06-18 NUMBER: 60/ 1998-06-18 NUMBER: 60/ 1998-06-18
25 25 27 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	090472 090535 090540 090542 090557 090676 090678	089952 090246 090252 090254 090349 090355 090429 090435	089512 089514 089532 089538 089598 089599 089600 089653 089653 089967 089908 089947

PRIOR APPLICATION NUMBER: 60/08029
PRIOR APPLICATION NUMBER: 60/08021
PRIOR FILING DATE: 1998-06-03
PRIOR APPLICATION NUMBER: 60/08021
PRIOR APPLICATION NUMBER: 60/08021
PRIOR APPLICATION NUMBER: 60/08022
PRIOR APPLICATION NUMBER: 60/08025
PRIOR APPLICATION NUMBER: 60/08026
PRIOR FILING DATE: 1998-06-04
PRIOR APPLICATION NUMBER: 60/08028
PRIOR APPLICATION NUMBER: 60/08029
PRIOR APPLICATION NUMBER: 60/08030
PRIOR APPLICATION NUMBER: 60/08030
PRIOR APPLICATION NUMBER: 60/08030
PRIOR APPLICATION NUMBER: 60/08030
PRIOR APPLICATION NUMBER: 60/08033
PRIOR APPLICATION NUMBER: 60/08033
PRIOR APPLICATION NUMBER: 60/08033
PRIOR APPLICATION NUMBER: 60/080326
PRIOR APPLICATION NUMBER: 60/080202

PRIOR

APPLICATION NUMBER: 60/087609 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087607 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087106 FILING DATE: 1998-05-28

PRIOR

PRIOR

PRIOR PRIOR PRIOR

PRIOR PRIOR PRIOR

OR APPLICATION NUMBER: 60/075945
OR FILING DATE: 1998-02-25
OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/083322
OR FILING DATE: 1998-04-28
OR APPLICATION NUMBER: 60/084600
OR FILING DATE: 1998-05-07
OR FILING DATE: 1998-05-07

PRIOR

PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24 APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13

APPLICATION NUMBER: 60/062250 FILING DATE: 1997-10-17 APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12

PRIOR PRIOR PRIOR PRIOR

PRIOR PRIOR

DR APPLICATION NUMBER: 60/088738
DR APPLICATION NUMBER: 60/088742
DR APPLICATION NUMBER: 60/088742
DR FILING DATE: 1998-06-10
DR APPLICATION NUMBER: 60/088810
DR FILING DATE: 1998-06-10
DR APPLICATION NUMBER: 60/088824
DR FILING DATE: 1998-06-10
DR APPLICATION NUMBER: 60/088826
DR APPLICATION NUMBER: 60/088826
DR APPLICATION NUMBER: 60/088858
DR FILING DATE: 1998-06-11
DR APPLICATION NUMBER: 60/088858
DR FILING DATE: 1998-06-11
DR APPLICATION NUMBER: 60/088861
DR FILING DATE: 1998-06-11
DR APPLICATION NUMBER: 60/088676
DR FILING DATE: 1998-06-11
DR APPLICATION NUMBER: 60/088976
DR APPLICATION NUMBER: 60/089105

PRIOR PRIOR

PRIOR PRIOR

FILING DATE: APPLICATION

NUMBER: 60/089440

PRIOR PRIOR PRIOR PRIOR

```
RESULT 7
US-09-991-181-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local s
Matches 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PŘIOR
FILE REFERENCE: P2730PIC53
CURRENT APPLICATION NUMBER: US/09/991,181
CURRENT FILING DATE: 2001-11-16
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                        TITLE OF INVENTION:
                                                                                                                                 APPL1CANT
                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                      APPLICANT:
                                                                                                                     APPLICANT:
                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/091982
FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01 APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/091626
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/
FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 1998-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091633 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GAERGD1LRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       al Similarity
123; Conser
                                                                                       r: Zhang, Zemin
INVENTION: Secre
                                                                                                                                                                                                                                                                                                                                                                                                                                           Ashkenazi, Avi J
                                                                                                                                                          Tumas,
                                                                                                                                                                                                                                                                           Grimaldi, J.Christopher
                                                                                                                    Wood, William I.
                                                                                                                                Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                        Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                                                                                                       Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                       Gerber, Hanspeter
                                                                                                                                                                                                                                                             Gurney, Austin
                                                                                                                                                                                                                                                                                             Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                      Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                   Ferrara,Napoleone
                                                                                                                                                                                                                                                                                                                                                                                  Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                              Botstein,David
                                                                                                                                                                                                                                                                                                                                                                                                                            Baker, Kevin P
                                                                                                                                                                                                                                                    Kljavin,Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09991181
o. US20020197615A1
                                                                                                                                                                                                       Paoni, Nicholas F
                                                                                                                                                                                                                       Pan, James
                                                                                                                                                                                                                                   Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER: 60/091978
1998-07-07
                                                                                                                                                               Daniel
                                                                                      Secreted and
                                                                        Acids Encoding the Same
                                                                                                                                              Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/091360
                                                                                                                                                                                                                                                                                                                        H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 650; DB Pred. No. 3.2e 0; Mismatches
                                                                                       Transmembrane Polypeptides and Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 9;
.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
```

APPLICATION NUMBER:

60/090252 60/090246

1998-06-

ILING DATE: 1998-06-23

60/090349 60/090254

1998-06-23

60/090355

ILING DATE:

1998-06-19 1998-06-

60/089952 60/089948

60 60

0,

APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:

60/089947 80/089908

1998-06-

APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06

1998-06-

LING DATE: 1998-06-

APPLICATION NUMBER: 60 FILING DATE: 1998-06-

ILING DATE: 1998-06-18

60/089907 60/089801 60/089653 60/089600

APPLICATION NUMBER: 60/089599 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089598 FILING DATE: 1998-06-17 APPLICATION NUMBER:

60/089538 60/089532 60/089514 60/089512

1998-06-1998-06 1998-06-

FILING DATE: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-08

1998-06-

PRIOR

APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE:

1998-06-25

998-06-25

60/090694

FILING DATE:

NUMBER:

60/090862

1998-06-26

1998-06-25

60/090696 60/090695 APPLICATION NUMBER:

FILING DATE:

.998-06-25 .998-06-24

APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-08 FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: 1998-06-24 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-00 FILING DATE:

APPLICATION NUMBER: 60/090535

998-06-24

1998-06-24

1998-06-24

60/090542 60/090540

60/090557

1998-06-24

60/090472 60/090445 60/090444 APPLICATION NUMBER: 60/090435

1998-06-24

1998-06-24

APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: 1998-06-24 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: 6 FILING DATE: 1998-06-FILING DATE: 1998-06-22 APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: 1998-06-19

1998-06-24

60/090431 60/090429

APPLICATION NUMBER: FILING DATE: 1998-0

998-06-25

60/090690 60/090678 60/090676

APPLICATION NUMBER:

APPLICATION NUMBER:

1998-06-25

```
US-09-990-436-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best
                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                 APPLICANT:
 PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-06-16 PRIOR APPLICATION NUMBER: 60/062250
                                         CURRENT APPLICATION NUMBER: US/09/990,436 CURRENT FILING DATE: 2001-11-14
                                                                       APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C14
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                APPLICANT:
                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                266,
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ashkenazi, Avi J.
                                                                                                                                                                                     Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                              Tumas,
                                                                                                                                                                                                                      Paoni,
                                                                                                                                                                                                                                                                             Grimaldi, J.Christopher Gurney, Austin L.
                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J
                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary E.
                                                                                                                                 Wood, William I.
                                                                                                                                                Williams,
                                                                                                                                                            Watanabe,
                                                                                                                                                                                                                                                                                                                                                      Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                      Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                   Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                               Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                              Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                               Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                             Baker, Kevin P
                                                                                                                                                                                                                                        Pan,James
                                                                                                                                                                                                                                                  Napier, Mary A.
                                                                                                                                                                                                                                                                  Kljavin,Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09990436
D. US20020198148A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                    Nicholas F.
                                                                                                                                                                              Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-07-09
                                                                                                                                                P. Mickey
                                                                                                                                                             Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/091978
60/062250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 650; DB 9; Pred. No. 3.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0
                       PRIOR PRIOR
                                                                                                                                                          PRIOR PRIOR PRIOR
                                                                                   PRIOR
                                                                                                              PRIOR FILING DATE:
                                                                                                                                                                                                 PRIOR FILING DATE: 1998-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1998-0 PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                            PRIOR APPLICATION NUMBER:
                                                                                                                                           PRIOR FILING DATE: 1998-06-10
                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                      PRIOR FILING DATE: 1998-00 PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR FILING DATE: 1998-06-05
PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                               PRIOR FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
        APPLICATION NUMBER: 60 FILING DATE: 1998-06-1 APPLICATION NUMBER: 60
                                                     APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                 APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-02
APPLICATION UMBER: 60/087827
FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/088021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1997-10-17
APPLICATION NUMBER: 60/
FILING DATE: 1997-11-12
                                                                                                                                                         APPLICATION NUMBER: 60/088826
                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/088026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/083322
FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1997-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/065311
```

1998-06-02

60/087759 60/087609 60/087607

998-06-04

60/088025

60/088028

60/088029

1998-05-28

60/087106

60/084600

60/078910

60/065186

1998-06-16

1998-06-11 1998-06-1 1998-06-1

60/088876 60/088861 60/088858

60/089105

1998-06-10 1998-06-10 1998-06-10 1998-06-10 1998-06-09 1998-06-05

60/088810

60/088742 60/088738 60/088734 60/088655 60/088217 60/088212 60/088202 60/088167 60/088326 60/088033 60/088030

60/088824

APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12 APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13 APPLICATION NUMBER: 60/066770

NUMBER: 60/065311: 1997-11-13

FILING DATE: 1997-11-24

PRIOR PRIOR

OR APPLICATION NUMBER: 60/087106
OR FILLING DATE: 1998-05-28
OR APPLICATION NUMBER: 60/087607
OR FILLING DATE: 1998-06-02
OR APPLICATION NUMBER: 60/087609
OR APPLICATION NUMBER: 60/087609
OR FILLING DATE: 1998-06-02

OR APPLICATION NUMBER: 60/075945
OR FILING DATE: 1998-02-25
OR APPLICATION NUMBER: 60/078910
OR FILING DATE: 1998-03-20
OR APPLICATION NUMBER: 60/083322
OR FILING DATE: 1998-04-28
OR FILING DATE: 1998-04-28
OR FILING DATE: 1998-05-07
OR FILING DATE: 1998-05-07

PRIOR

PRIOR

OR APPLICATION NUMBER: 60/087759
OR FILING DATE: 1998-06-02
OR APPLICATION NUMBER: 60/087827
OR APPLICATION NUMBER: 60/088021
OR APPLICATION NUMBER: 60/088021
OR APPLICATION NUMBER: 60/088025
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088026
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088026
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088028
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088029
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088029
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088029
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088030

-		-																			• •					-	-	֥		-					_	-					-								
		•••		·. ·.	٠.		٠.			٠.				٠.			٠.			٠.	٠			٠. ،		٠		٠		•••		•••		•••		•••		•••	·. •.			••							٠.
o I	Si	OI	PRIOR	H	×	PRIOR	ι н	PRIOR		\mathbf{H}	PRIOR	PRIOR	PRIOR	PRIOR					PRIOR				IOR	IOR	PRIOR	-	PRIOR	PRIOR			PRIOR		PRIOR		PRIOR	\mathbf{H}		\mathbf{H}	PRIOR	н .	\vdash	SIS		SI	PRIOR	RIO	PRIOR	38	RIO
ICATION NG DATE	ATION DATE	ILING DATE	PPLICATION	ILING DATE PPLICATION	PPLICATION	PPLICATION	LING DATE	PPLICATION	PPLICATION	LING DATE	LICATION	LING DATE	TLING DATE	PPLICATION	TE S	ZÉ	S	TE	APPLICATION	S	TE		5	TE C	TLING DATE	PPLICATION	PLICATION LING DATE	LING DATE	LING DATE	PLICATION	PLICATION LING DATE	LINC	DATE	PLICATION	PPLICATION	ILLING	APDITION DATE	PPLICATIO	Η̈́	ILING DAT	APPLICATION	PPLICATIO	FILING DATE	ILING DA	APPLICATION	PPLICATIO	FILING DATE	LING	ICATI
NUMBER: 60 1998-06-2	NUMBER: 60 1998-06-2	1998-06-25	1998-06-25	: 1998-06-25 NUMBER: 60/090695	NUMBER: 60	NUMBER: 60/090690 : 1998-06-25	1998-06-25	E 9	NUMBER:	1998-06-24	NUMBER: 60	NUMBER: 60/090542	: 1998-06-24	NUMBER: 60	: 1998-06-24	NIMBER	NUMBER: 60	: 1998-06-24	NUMBER	NUMBER: 60	: 1998-06-24	NUMBER: 6	NUMBER: 60	: 1998-06-	: 1998-06-23	NUMBER: 60	NUMBER: 6	1998-06-22	. 1998-06-2 NUMBER: 60	NUMBER: 60	. 1998-	: 1998-06-19	: 1998-06-19 NUMBER: 60/08	NUMBER: 60	NUMBER	: 1998-06-18	: 1998-	NUMBER: 60	NUMBER: 60/089801	: 1998-06-17	. 1998-06-1	NUMBER: 60	: 1998-	: 1998-06-17	NUMBER: 60	NUMBER:	: 1998-06-17	: 1998-06-16	NUMBER: 60

PRIOR PRIOR PRIOR PRIOR

PRIOR

PRIOR

OR APPLICATION NUMBER: 60/088734
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/08874
OR APPLICATION NUMBER: 60/08874
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088810
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088810
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088824
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088826
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/088858
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/088861

PRIOR PRIOR PRIOR PRIOR

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60/088217 FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088655 FILING DATE: 1998-06-09

APPLICATION NUMBER: 60/088212 FILING DATE: 1998-06-05 FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088202

PRIOR PRIOR PRIOR PRIOR

OR FILING DATE: 1998-06-04
R APPLICATION NUMBER: 60/088033
DR FILING DATE: 1998-06-04
DR APPLICATION NUMBER: 60/088326
DR FILING DATE: 1998-06-04
DR APPLICATION NUMBER: 60/088167
DR FILING DATE: 1998-06-05
DR FILING DATE: 1998-06-05

PRIOR PRIOR PRIOR PRIOR PRIOR

PRIOR PRIOR

OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/088876
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/089105
OR FILING DATE: 1998-06-12
OR APPLICATION NUMBER: 60/089440
OR FILING DATE: 1998-06-16
OR FILING DATE: 1998-06-16
OR APPLICATION NUMBER: 60/089512

```
PRIOR PRIOR
                                                                                                                                                PRIOR
                                                                                                                                                                              PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                             PRIOR PRIOR
                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                          R FILING DATE: 1998-06-24
R APPLICATION NUMBER: 60/09
R FILING DATE: 1998-06-24
R PELICATION NUMBER: 60/09
R APPLICATION NUMBER: 60/09
R APPLICATION NUMBER: 60/09
                                                                              R APPLICATION NUMBER: 6
R FILLING DATE: 1998-06
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06
R APPLICATION NUMBER: 6
                             FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090355 FILING DATE: 1998-06-23 APPLICATION NUMBER: 60/090429 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089538 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/089514
FILING DATE: 1998-06-16
                APPLICATION NUMBER: 60/090863
                                                                                                                                                                 APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                              APPLICATION NUMBER: 60/090678 FILING DATE: 1998-06-25
                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                               FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-22 APPLICATION NUMBER: 60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/089948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/089947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/089653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING
DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-22
                                                                                              1998-06-25
                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-18
                                                                                                                               1998-06-25
 1998-06-26
                                                                                                                                                                                                                                                                                               .998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      998-06-
                                                                                                                                                                                                                                998-06-25
                                                                                                                                                60/090694
                                                                                                                                                                                                                                                                                60/090557
                                                                                                                                                                                                                                                                                                              60/090542
                                                                                                                                                                                                                                                                                                                                             60/090540
                                                                                                                                                                                                                                                                                                                                                                                                            60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       806680/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089532
                                                60/090862
                                                                               60/090696
                                                                                                                                                                               60/090690
                                                                                                                                                                                                                                               60/090676
                                                                                                                                                                                                                                                                                                                                                                             60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089599
                                                                                                                60/090695
```

```
RESULT 5
US-09-989-730-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local S
Matches 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1998-07-01
PRIOR APPLICATION NUMBER: 60/091478
PRIOR FILING DATE: 1998-07-02
PRIOR APPLICATION NUMBER: 60/091544
PRIOR FILING DATE: 1998-07-01
PRIOR APPLICATION NUMBER: 60/091519
PRIOR FILING DATE: 1998-07-02
PRIOR FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 266, Application US/09989730 Publication No. US20020197674A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/091626
PRIOR FILING DATE: 1998-07-02
PRIOR APPLICATION NUMBER: 60/091633
PRIOR FILING DATE: 1998-07-02
                                                CURRENT APPLICATION NUMBER: US/09/989,730 CURRENT FILING DATE: 2001-11-20 PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
               PRIOR FILING DATE: 1997-06-16 PRIOR APPLICATION NUMBER: 60/0
                                                                                                TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C69
                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                   APPLICANT:
                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OR APPLICATION NUMBER: 60/091978
OR FILING DATE: 1998-07-07
OR APPLICATION NUMBER: 60/091982
OR FILING DATE: 1998-07-07
OR APPLICATION NUMBER: 60/092182
OR FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAERGDILRKADSSTNIFNPRGNLRKFODFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   al Similarity 99.2
123; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124
                                                                                                                                                   Zhang, Zemin
                                                                                                                                                                                    Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                       Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                         Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                        Gerber, Hanspeter
                                                                                                                                                                    Wood, William I.
                                                                                                                                                                                                                      Tumas,
                                                                                                                                                                                                                                    Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                    Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                           Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baker, Kevin P
                                                                                                                                                                                                                                                                      Paoni, Nicholas F
                                                                                                                                                                                                                                                                                       Pan,James
                                                                                                                                                                                                                                                                                                        Napier, Mary A.
                                                                                                                                                                                                                                                                                                                        Kljavin,Ivar J
                                                                                                                                                                                                                    Daniel
1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99.2%;
                 60/062250
                                                                                                                                                                                                                                                                                                                                                                                                          H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 650; DB Pred. No. 3.2e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 9;
.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US-09-990-444-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 266, A
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                       CURRENT APPLICATION NUMBER: US/09/990,444
CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR FILING DATE: 1997-06-16
                                                                                                                         APPLICANT: Zhang, Zo
TITLE OF INVENTION: S
TITLE OF INVENTION:
                                                                                                                                                            APPLICANT:
APPLICANT:
                                                                                                         TITLE OF INVENTION: Acids Encoding the FILE REFERENCE: P2730P1C19
                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                            APPL1CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                         PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                        PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                       PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ب
APPLICATION NUMBER: 60/062250 FILING DATE: 1997-10-17 APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091978
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/092182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: F1LING DATE: 1998-07 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ashkenazi, Avi J.
Baker, Kevin P.
                                                                                                                                                                                      Watanabe, Colin K.
Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124
                                                                                                                                                                                                                                       Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                  Gerber, Hanspeter
Gerritsen, Mary E.
                                                                                                                                                                         Wood, William I.
                                                                                                                                                                                                                          Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                    Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers,Luc
                                                                                                                                                                                                                                                                     Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                        Pan, James
                                                                                                                                                                                                                                                                                                                        Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Botstein,David
                                                                                                                                                                                                                                                                                                      Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09990444 o. US20020193300A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                      Margaret Ann art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                       Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER: 60/
: 1998-07-01
                                                                                                                                                            Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                    , Audrey
                                                                                                                                        Secreted and Transmembrane Polypeptides and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         650; DB 9;
No. 3.2e-66;
                                                                                                                           Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0,
```

PR10R PRIOR PR10R APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-12 FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-11 APPLICATION NUMBER: F1L1NG DATE: 1998-06
APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-16 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-16 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088025 APPLICATION NUMBER: FILING DATE: 1998-08 APPLICATION NUMBER: APPLICATION NUMBER: 60/087759 F1L1NG DATE: 1998-06-02 FILING DATE: 1997-11-12 F1LING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: F1L1NG DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-00 FILING DATE: 1998-00 APPLICATION NUMBER: APPLICATION NUMBER: 60/087609 FILING DATE: 1998-06-02 FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: 60/087106 FILING DATE: 1998-05-28 APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07 FILING DATE: APPLICATION NUMBER: 60/083322 FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/075945 FIL1NG DATE: 1997-11-24 APPLICATION NUMBER: 60/066770 APPLICATION NUMBER: 60/065311 LING DATE: LING DATE: LING DATE: 1998-06-10 NUMBER: 60/088742 1998-06-10 1998-06-04 1998-06-04 1998-06-02 1998-03-20 1998-06-10 1998-06-10 1998-06-10 1998-06-10 1998-06-04 1998-06-04 1998-06-04 1998-04-28 1998-02-25 1998-06-04 L998-06-04 998-06-09 .998-06-05 .998-06-05 998-06-05 .998-06-05 1998-06-03 60/088876 60/088738 60/088734 60/088212 60/088033 60/088026 60/078910 60/089512 60/089440 60/089105 60/088861 60/088858 60/088826 60/088824 60/088810 60/088655 60/088217 60/088202 60/088167 60/088326 60/088030 60/088029 60/088028 60/088021 60/087827 60/087607

PRIOR FILING DATE: 1998-06-22
PRIOR APPLICATION NUMBER: 60/090254
PRIOR FILING DATE: 1998-06-22
PRIOR APPLICATION NUMBER: 60/090349
PRIOR FILING DATE: 1998-06-23
PRIOR APPLICATION NUMBER: 60/090355
PRIOR FILING DATE: 1998-06-23 PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR APPLICATION NUMBER: 60/090444
PRIOR FILING DATE: 1998-06-24
PRIOR APPLICATION NUMBER: 60/090445 PRIOR APPLICATION PRIOR FILING DATE: PRIOR PRIOR PRIOR PRIOR PRIOR OR FILING DATE: 1998-06-16
OR APPLICATION NUMBER: 60/089532
OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089538
OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089598
OR FILING DATE: 1998-06-17
OR APPLICATION NUMBER: 60/089599 R FILING DATE:
R APPLICATION N
R FILING DATE:
R APPLICATION N R FILING DATE: 1998-06
R APPLICATION NUMBER: (
R FILING DATE: 1998-06
R APPLICATION NUMBER: (FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090431
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090435 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: 60/090535 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24 FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00 FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00 FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090472
FILING DATE: 1998-06-24 APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089801 APPLICATION NUMBER: FILING DATE: NUMBER: 60/ : 1998-06-25 NUMBER: NUMBER: NUMBER: NUMBER: 60/090863 NUMBER: NUMBER: NUMBER: NUMBER: 60/090557 тупнек: 60/089600 1998-06-17 NUMBER: 60/089907 1998-06-18 1998-06-24 1998-06-19 1998-06-19 1998-06-26 1998-06-26 1998-06-25 1998-06-25 1998-06-25 1998-06-25 1998-06-25 1998-06-24 1998-06-24 1998-06-22 1998-06-19 1998-06-18 1998-06-18 1998-06-17 60/090429 60/090694 60/090676 60/090542 60/090246 60/089952 60/089948 60/089947 60/089653 60/090696 60/090695 60/090690 60/090678 60/090252 60/090862 806680/09

PRIOR PRIOR PRIOR PRIOR PRIOR

PR APPLICATION NUMBER: 60/01
REFILING DATE: 1998-06-04
REPLICATION NUMBER: 60/01
PREFILING DATE: 1998-06-04
REFILING DATE: 1998-06-04

60/088030 60/088029 60/088028

60/088033

PRIOR PRIOR PRIOR PRIOR PRIOR

OR APPLICATION NUMBER: 66/087827
OR FILING DATE: 1998-06-03
OR APPLICATION NUMBER: 60/088021
OR APPLICATION NUMBER: 60/088025
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088025
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/088026
OR FILING DATE: 1998-06-04

PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/

FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087607

FILING DATE: 1998-06-02

60/087759 60/087609 PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION N FILING DATE:

NUMBER: 60/ : 1998-05-28

60/087106 60/084600

FILING DATE: 1998-05-07

NUMBER: NUMBER: NUMBER:

.998-04-28

R APPLICATION N R FILING DATE: APPLICATION N

FILING DATE: 1 APPLICATION

998-03-20

60/083322

60/078910

APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25

FILING

DATE:

997-11-24

APPLICATION | FILING DATE:

NUMBER: 60/ : 1997-11-13

NUMBER:

60/066770 60/065311

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60

FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/

FILING DATE: APPLICATION N FILING DATE:

NUMBER: 1998-06-16 1-90-8661

60/089512

60/089440 60/089105 60/088876

FILING DATE APPLICATION

PRIOR PRIOR PRIOR

APPLICATION NUMBER:

60/088861 60/088858

APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-11

60/088826

PRIOR PRIOR PRIOR PRIOR

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

PRIOR

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

PRIOR

OR APPLICATION NUMBER: 60/08816
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/08816
OR APPLICATION NUMBER: 60/088202
OR FILING DATE: 1998-06-05
OR APPLICATION NUMBER: 60/088212
OR FILING DATE: 1998-06-05
OR APPLICATION NUMBER: 60/088212
OR APPLICATION NUMBER: 60/088217
OR APPLICATION NUMBER: 60/088217
OR APPLICATION NUMBER: 60/088655
OR FILING DATE: 1998-06-09
OR APPLICATION NUMBER: 60/088734
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088738
OR APPLICATION NUMBER: 60/088738
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088742

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

PRIOR

```
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                               FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090696
                                                                                                                          FILING DATE: 1998-06 APPLICATION NUMBER:
FILING DATE:
APPLICATION |
                      FILING DATE: 1998-0
APPLICATION NUMBER:
                                                                           FILING DATE: APPLICATION N
                                                                                                                                                      FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                           FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                               APPLICATION NUMBER: 60/090690
                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                              APPLICATION
                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                         APPLICATION
                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/090444 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/
FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/089947 FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/089653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/089600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION FILING DATE:
                                                                           NUMBER:
                                                                                                                                                                                            NUMBER: 60/090678: 1998-06-25
                                                                                                                                                                                                                                                                                        NUMBER:
                                                                                                                                                                                                                                                              NUMBER:
          1998-07-01
                                                            1998-06-26
                                                                                                                                         1998-06-25
                                                                                                                                                                   1998-06-25
                                                                                                                                                                                                                                                                          1998-06-24
                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER: 60/089532
: 1998-06-17
                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                       1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-19
                                 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-22
                                                                                      .998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-
                      60/091360
                                                60/090863
                                                                        60/090862
                                                                                                                           60/090695
                                                                                                                                                      60/090694
                                                                                                                                                                                                                                                             60/090557
                                                                                                                                                                                                                                  60/090676
                                                                                                                                                                                                                                                                                     60/090542
                                                                                                                                                                                                                                                                                                                                        60/090535
                                                                                                                                                                                                                                                                                                                                                                  60/090472
                                                                                                                                                                                                                                                                                                                                                                                           60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/089952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089948
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          806680/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/089907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08680/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/089599
6-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/089538
```

```
TITLE OF INVENTION: Secreted and Transmembrane Pol
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C61
CURRENT APPLICATION NUMBER: US/09/989,735
CURRENT FILING DATE: 2001-11-19
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR FILING DATE: 1997-06-16
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/06250
PRIOR APPLICATION NUMBER: 60/062186
PRIOR APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us-09-989-735-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 266
Publication
                                                                                                                                                                                                APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local S
Matches 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: APPLICANT:
                                                                                                                                                                       APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                             APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: APPLICANT:
                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61 GAERGDILKKADSSTNIFNPRGNLRKFODFSGODPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DR FILING DATE: 1998-07-02

OR APPLICATION NUMBER: 60/091633

DR FILING DATE: 1998-07-02

DR APPLICATION NUMBER: 60/091978

DR FILING DATE: 1998-07-07

DR APPLICATION NUMBER: 60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091519
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
APPLICATION 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         266,
NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ashkenazi, Avi J.
                                                                                                                                                                                   Watanabe, Colin Williams, P. Mic Wood, William I.
                                                                                                                                                                       Zhang, Zemin
                                                                                                                                                                                                                                Tumas, Daniel
                                                                                                                                                                                                                                        Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                               Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                              Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
                                                                                                                                                                                                                                                                           Paoni, Nicholas F
                                                                                                                                                                                                                                                                                            Pan,James
                                                                                                                                                                                                                                                                                                     Napier, Mary A.
                                                                                                                                                                                                                                                                                                                       Kljavin, Ivar J
                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul J
                                                                                                                                                                                                                                                                                                                                                                                                                           Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                       Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09989735
D. US20020193299A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-07-02
                                                                                                                                                                                                P. Mickey
                                                                                                                                                                                                                 Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/092182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 650; DB 9;
Pred. No. 3.2e-66;
0; Mismatches 1
                                                                                                                                                Polypeptides and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                 Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
```

```
Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 2
US-09-989-293A-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                 APPLICANT:
                                      CURRENT APPLICATION NUMBER: US/09/989,293A
CURRENT FILING DATE: 2001-11-20
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                   TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                      TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C66
                                                                                                                                                                  APPLICANT:
                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                            \PPLICANT:
                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07 APPLICATION NUMBER: 60/092182 FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/
FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GAERGDILRKADSSTNIFNPRGNLRKFQDESGQDPNILLSHLLARIWKPYKKRETPDCFW
APPLICATION NUMBER: 60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                266,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66, Application US/09989293A
US20020177164A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Simllarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ashkenazi, Avl J
                                                                                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                   Grimaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                Godowskl, Paul J
                                                                                                                                                                                                                                                                                                                                                               Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                        Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                   Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker, Kevin P.
                                                                                                                                                                 Zhang,
                                                                                                                                                                                wood, William I.
                                                                                                                                                                                              Williams, P. Mickey
                                                                                                                                                                                                          Watanabe,
                                                                                                                                                                                                                        Tumas,
                                                                                                                                                                                                                                      Stewart,
                                                                                                                                                                                                                                                               Paoni, Nicholas F.
                                                                                                                                                                                                                                                                             Pan, James
                                                                                                                                                                                                                                                                                                        Kljavin,Ivar J.
                                                                                                                                                                                                                                                                                                                      Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                      Ferrara, Napoleone
                                                                                                                                                                                                                                                                                          Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                Margaret Ann
                                                                                                                                                                   Zemln
                                                                                                                                                                                                                         Daniel
                                                                                                                                                                                                                                    Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99.2%;
                                                                                                                                                                                                        Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/091978
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 650; DB 9;
Pred. No. 3.2e-66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
```

PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-06 PRIOR FILING DATE: 1998-06-04
PRIOR APPLICATION NUMBER: 60/088033 PRIOR PRIOR APPLICATION NUMBER: 60/088742 PRIOR FILING DATE: 1998-06-10 PRIOR FILING DATE: PRIOR APPLICATION PRIOR FILING DATE: PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0 PRIOR PRIOR PRIOR PRIOR APPLICATION NUMBER: PRIOR PRIOR FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/0 FILING DATE: 1998-00 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-04-28 FILING DATE: 1997-11-13 APPLICATION NUMBER: 60/ APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/087827 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/084600 APPLICATION NUMBER: 6 FILING DATE: 1998-02-FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088030 APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04 FILING DATE: 1998-05-07 FILING DATE: 1998-03-20 APPLICATION NUMBER: FILING DATE: 1997-11-APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088217 FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088212 APPLICATION NUMBER: 60/088202 FILING DATE: 1998-06 APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04 FILING DATE: 1998-06-04 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/089512 FILING DATE: 1998-06-16 APPLICATION NUMBER: 60/089514 APPLICATION NUMBER: 60/089105 FILING DATE: 1998-06-12 FILING DATE: 1998-06-11 APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-16 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-06-11 DATE: 1998-06-03 1998-05-28 1998-06-04 1998-06-11 1998-06-10 1998-06-10 1998-06-10 1998-06-10 1998-06-10 1998-06-09 1998-06-05 1998-06-04 60/083322 60/066770 60/088028 60/088025 60/088021 60/087759 60/087609 60/087607 60/087106 60/078910 60/075945 60/088167 60/088326 60/088029 60/088738 60/088734 60/088655 60/089440 60/088876 60/088861 60/088858 60/088826 60/088824 018880/09 60/089512

			-		•																	-					•														-			•			•			
																		,																																
٠.			٠.			٠.							٠.	٠.			٠.	·														•. •		٠. ،				•••				٠. ٠							•••	
o i	PRIOR	4 H	OI	RIC		RIC	RIC	ささ	SIS	Н	H t	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR	PRIOR		_		\mathbf{H}	PRIOR	_	2 2	ö	70 7	o i	10	PRIOR
PPLICA	FILING DAT	LING DA	PLICAT	LING DA	DITCATT	PLICATI	LING	DITCAT	PLICA	LING	PLIC	PLIC	LING	PLIC	LINC	DI TO	APPLICATION	LIN	DT. TO	PLI(LIN	DI.TO	PLI(LIN	DI.TO	PLIC	LIN	FILING DATE	LIN	PLIC	PLI	LIN	PLIC	PLI		LIN	PLIC	PLIC	PLICA	LING	APPLICATION	PPLIC	APPLICATION FILING DATE	ILING	APPLICATIO	PPLICA	LING	ILING D	PPLICATI	FILING DAT
N NUMBER	TE: 1998-0	E: 1998-	N NUMBER	TE: 1998-0	E: 1998-	N NUMBER	E: 1998-	N NIMBER	N NUMBER	1998-	NUMBER	NUMBER	: 1998-	NUMBER	-866I :	-REET :	NUMBER	1998-	-866T	NUMBER	1998-	-REET :	NUMBER	: 1998-	. 1998-	NUMBER	. 1998-	199	. 1998-	NUMBER	NUMBER	1998-	NUMBER	NUMBER	NUMBER	1998-	NUMBER	NUMBE	NUMBER	1998-	1998-	NUMBER	NUMBER	: 1998-	NUMBER	N NUMBER	TE: 1998-0	E: 1998-	NUMBER	TE: 1998-0
60	60/091360 7-01	6-26	60	Ō	60.700096	, 60 0	6-25	60709	9	6-25	090	ת	6-25	60	6-24	6070005	60	6-24	σ	09	6-24	60709	90	6-24	6-24	60	σ	6-24	6	60	Σ.	6-22	09	60	2	6-19	60 1-8	60	עכ	6-I8	607099909 16-18	60	2	6-17	60/089653	n	Ō	6-17	60	6-17

PRIOR PRIOR

PRIOR

APPLICATION NUMBER: 60/088033 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088326 FILING DATE: 1998-06-04

FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088030
FILING DATE: 1998-06-04

FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088029 APPLICATION NUMBER: 60/088028

DR REFLACTORY

OR APPLICATION NUMBER: 60/088167

OR APPLICATION NUMBER: 60/088167

OR FILING DATE: 1998-06-05

FOR APPLICATION NUMBER: 60/088202

FOR FILING DATE: 1998-06-05

TOR APPLICATION NUMBER: 60/088212

TOR PTITING DATE: 1998-06-05

FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088217

PRIOR PRIOR

APPLICATION NUMBER: 60/087827 FILING DATE: 1998-06-03 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087759 FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087609 FILING DATE: 1998-06-02 'FILING DATE: 1998-05-28
APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02 APPLICATION NUMBER: 60/087106 'FILING DATE: 1998-05-28

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04

60/088021

PRIOR

PRIOR

APPLICATION NUMBER: 60/088025 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04

PRIOR

PRIOR PRIOR

PRIOR

PRIOR

PRIOR PRIOR

PRIOR

APPLICATION NUMBER: 60/083322 FILING DATE: 1998-04-28 APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07

APPLICATION NUMBER: 60/078910 FILING DATE: 1998-03-20

1

APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25 APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24

PRIOR PRIOR

FILING DATE: 1998-06-16
APPLICATION NUMBER: 60/089514
FILING DATE: 1998-06-16
APPLICATION NUMBER: 60/089532

1998-06-16 NUMBER: 60/089532

OR FILING DATE: 1998-06-11

OR APPLICATION NUMBER: 60/088876

OR FILING DATE: 1998-06-11

OR APPLICATION NUMBER: 60/089105

OR FILING DATE: 1998-06-12

OR FILING DATE: 1998-06-16

OR FILING DATE: 1998-06-16

OR FILING DATE: 1998-06-16

OR APPLICATION NUMBER: 60/089512

PRIOR PRIOR

FILING DATE: 1998-05-10
APPLICATION NUMBER: 60/088826
TTTING DATE: 1998-06-10

FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088810
FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088824

APPLICATION NUMBER: 60/088742 FILING DATE: 1998-06-10

FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088858
FILING DATE: 1998-06-11
APPLICATION NUMBER: 60/088861

PRIOR

R FILING DATE: 1998-06-05

R APPLICATION NUMBER: 60/088655

R FILING DATE: 1998-06-09

R APPLICATION NUMBER: 60/088734

R FILING DATE: 1998-06-10

R APPLICATION NUMBER: 60/088738

R APPLICATION NUMBER: 60/088738

PRIOR

GenCore version 5.1.3 Compugen Ltd.

: 1

```
Minimum DB seq length: 0 Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                       Database :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Totai number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        March 10, 2003, 17:38:48; Search time 9.71892 Seconds (without alignments) 538.033 Million ceil updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-831-907A-1
655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         188354 seqs, 42170167 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MYKLASCCLLFIGFLNPLLS......RIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                       Published_Applications_AA: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maximum Match 100%
Listing first 45 summaries
                        /cgn2_6/ptodata/1/pubpaa/US08__TUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
                                                                                                                                                                                              /cgn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/PCT_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
/cgn2_6/ptodata/1/pubpaa/US60_PUBCOMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ŗ.
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Ü	3
9	
3	
3	
2	2
2	
-	

						Σ
17 18 19	14 15	11 12 13	10 9	10014	ı N⊢	Result No.
650 650	650 650	650 650	650 650	550000	650	Score
99.2 99.2 2	99. 99. 22			99.2	99.2	Query Match
124 124 124	124 124 124	124 124 124	124 124 124	124 124 124 124	124	Length
9 10	999	999	ωωωι	vooo	ا وو	BB
726-2 -722- -723-	US-09-997-428-266 US-09-997-666-266 US-09-990-711-266	US-09-993-667-266 US-09-990-438-266 US-09-990-562-266	US-09-993-687-266 US-09-989-734-266 US-09-989-734-266	US-09-990-444-266 US-09-989-730-266 US-09-989-730-266 US-09-990-436-266 US-09-991-181-266	US-09-992-598-266 US-09-989-293A-266	ID
266, e 266, e 266,	Sequence 266, Sequence 266, Sequence 266,	2000,		, , , , , , , , , , , , , , , , , , ,	266	Description
App App App App	App App App	App App App	App	App App	App App	

44	4 2 3 2	41	39	38	37 7	35	34	ω	32	31	30	29	28	27	26	. 25	24	23	22	21	20
65.5	თ თ თ თ	б б	n 0 0	69	5 O	000	69	69	69	71	586.5	650	650	650	650	650	650	650	650	650	650
10.1	10.1 10.1	10.1	10.5	10.5	10.5	10.5	10.5 .	10.5	10.5	10.8	89.5	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2	99.2
814 216	783 814	437	4 3 2 7 7	431	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	431	431	431	431	465	125	124	124	124	124	124	124	124	124	124	124
10	9	10	010	10	- v	9	9	œ	œ	10	10	10	10	10	10	10	10	10	10	10	10
US-09-808-568-5 US-09-925-299-841	US-09-888-615-67 US-10-156-239-52	US-09-808-568-2	US-09-361-741-3	US-09-828-607-2	US-09-045-331-2	US-10-062-370-5	US-09-982-543A-10	US-08-937-755-2	US-08-822-186-2	US-09-815-242-10512	US-09-854-105-2	US-09-989-721-266	US-09-990-456-266	US-09-993-604-266	US-09-991-163-266	US-09-990-442-266	US-09-991-073-266	US-09-989-732-266	US-09-989-731-266	US-09-989-727-266	US-09-989-279-266
	Sequence 67, Appl Sequence 52, Appl		Sequence 3, Appii		Sequence 2, Appli	Sequence 5, Appli		Ņ	Sequence 2, Appli	Sequence 10512, A	Sequence 2, Appii		•				Sequence 266, App	`	Sequence 266, App	`	Sequence 266, App

ALIGNMENTS

```
US-09-992-598-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 266, Application US/09992598 Patent No. US20020160384A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                    APPLICANT:
PRIOR APPLICATION NUMBER: 60/062250 PRIOR FILING DATE: 1997-10-17 PRIOR APPLICATION NUMBER: 60/065186 PRIOR FILING DATE: 1997-11-12 PRIOR APPLICATION NUMBER: 60/065311 PRIOR FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                            CURRENT APPLICATION NUMBER: US/09/992,598
CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                   APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ashkenazi, Avi J.
Baker, Kevin P.
                                                                                                                                                                                                                                                                             Watanabe, Colin K
Wiiliams, P. Mickey
                                                                                                                                                                                                                                                                                                                     Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                    Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney, Austin I
Kijavin, Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
                                                                                                                                                                                                                                                             Wood, Wiiliam I.
                                                                                                                                                                                                                                                                                                                                  Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Grimaidi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ferrara, Napoieone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Botstein, David
                                                                                                                                                                                                                                                                                                                                                                       Paoni, Nichoias F
                                                                                                                                                                                                                                                                                                                                                                                              Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                             Napier, Mary A.
```

THIS PAGE BLANK (USPTO)

В

117 WKYCV 121

```
RESULT 15
AAU80115
                                                                                                                                                                                                                                                                   Ş
                                      밁
                                                                      Qy
                                                                                                              밁
                                                                                                                                               Q
                                                                                                                                                                                       Query Match
Best Local S
Matches 77
                                                                                                                                                                                                                                                                                                                 attention deficit disorder, narcolepsy, anxiety, depression, insomnia, schizophrenia or fear. The polypeptides of the invention, their precursor proteins and their encoding DNAs are useful in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, insomnia, schizophrenia or fear. They are also useful for gene therapy. The polypeptide is a grotein-coupled receptor protein, with ligand activity to sensor epitheium neuropeptide-like receptor. The present sequence represents a pig sensory endothelium neuropeptide-like receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SENR; Sensory epithelium neuropeptide-like receptor; pig; fear; attention deficit disorder; narcolepsy; anxiety; depression; insomnia; schizophrenia; G protein-coupled; receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This invention relates to an anti-attention deficit disorder or anti-narcoLepsy agent containing a polypeptide with a sequence identical or substantially similar to a fully defined 12 amino acid sequence given in the specification, and its amide, ester or their sait. The peptides have ligand activity to sensory epithellum neuropeptide-like receptor (SENR) protein. The invention also includes a method for diagnosing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 6; Page 271; 290pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Polypeptide GPR12 with ligand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-329576/36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200214513-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pig sensory epitheilum neuropeptide-like receptor (SENR) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             07-OCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU80115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU80115 standard; Protein; 121 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matsumoto Y, Watanabe T, Takahashi H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-AUG-2000; 2000JP-0247968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10-AUG-2001; 2001WO-JP06899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-FEB-2002
                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                      protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              indications and for anxiety
 120 WKYCV 124
                                      59
                                                                          61
                                                                                                                                                                                         Local Similarity 61.6 es 77; Conservative
                                                                                                                \vdash
                                                                                                                                                   1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                       GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETP-DCF 119
                                      GAEAGEDLREADAGMDIFYPRGEMRK--AFSGQDPNIFLSHLLARIKKPYKKRGPPSECF 116
                                                                                                                MSKLVP-CLLLLGCLGLLFALPVPDSRKEPLPFSAP-EDVRSAWDELERASLLQMLPETP 58
                                                                                                                                                                                                                                                                   121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (first entry)
                                                                                                                                                                                                          52.3%;
61.6%;
                                                                                                                                                                                       12;
                                                                                                                                                                                       Score 342.5; DB 23;
Pred. No. 1.5e-32;
Pred. Mismatches 31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mori M;
                                                                                                                                                                                                                           DB 23; Length 121;
                                                                                                                                                                                         Indels
                                                                                                                                                                                         ა,
                                                                                                                                                                                       Gaps
                                                                                                                                                                                           4.
```

Db 117 WKYCV 121

Search completed: March 10, 2003, 17:38:44
Job time: 31.1622 secs

```
Вþ
                                      Q
                                                                                                       δÃ
             B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 13
AAU80120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                                                                                                        Matches
                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                                                                       attention deficit disorder, narcolepsy, anxiety, depression, insomnia, schizophrenia or fear. The polypeptides of the invention, their precursor proteins and their encoding DNAs are useful in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, insomnia schizophrenia or fear. They are also useful for gene therapy. The polypeptide is a G protein-coupled receptor protein, with ligand activity to sensor epithelium neuropeptide-like receptor. The present sequence represents the cow sensory endothelium neuropeptide-like
                                                                                                                                                                                                                                                                                                                                                                                     narcolepsy agent containing a polypeptide with a sequence identical or substantially similar to a fully defined 12 amino acid sequence given in the specification, and its amide, ester or their salt. The peptides have ligand activity to sensory epithelium neuropeptide-like receptor (SENR) protein. The invention also includes a method for diagnosing
                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                    sequence represents the cow sensory receptor protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Polypeptide GPR12 with ligand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This invention relates to an anti-attention deficit disorder or anti-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 6; Page 276; 290pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-329576/36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matsumoto Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SENR; Sensory epithelium neuropeptide-like receptor; cow; fear; attention deficit disorder; narcolepsy; anxiety; depression; insomnia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Cow sensory epithelium neuropeptide-like receptor (SENR) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                indications and for anxiety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (TAKE ) TAKEDA CHEM IND LTD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-AUG-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-AUG-2001; 2001WO-JP06899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21-FEB-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           schizophrenia; G protein-coupled; receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU80120 standard; Protein; 122 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WO200214513-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU80120;
           60
                                        61
                                                                                                                                                    Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120
                                                                         ٢
                                                             MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
GAETGEGLRNTDPITNIFYPRGNMRK--AFSGQDPKLFLSDLLSRIRKQSKKRGPSSECF 117
                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WKYCV 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WKYCV
                                                                                                                                                                                                      122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            124
                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000JP-0247968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watanabe T, Takahashi H, Mori M;
                                                                                                                                                                                                      ΑĄ;
                                                                                                                                                  61.4%;
                                                                                                                                       10;
                                                                                                                                  Score 402; DB 23;
Pred. No. 1.4e-39;
0; Mismatches 25;
                                                                                                                                                              Length 122;
                                                                                                                                  Indels
                                                                                                                                4;
                                                                                                                                                                                                                                                                                                             insomnia,
                                                                                                                              Gaps
                                                                                                                              ω
```

δ DЪ δõ DЬ

120 WKYCV

59 61

GAEAGEDLREADAGMDIFYPRGEMRK--AFSGQDPNIFLSHLLARIKKPYKKRGPPSECF GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETP-DCF 119 δÃ

MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60

MSKLVP-CLLLLGCLGLLFALPVPDSRKEPLPFSAP-EDVRSAWDELERASLLQMLPETP 58

Matches

Conservative

12;

1.5e-32; nes 31;

Indels

ۍ ۲.

Gaps

4.

```
RESULT 14
AAB12496
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                   Query Match
Best Local :
                                                                                         The present invention provides peptides which are ligands for sensory epithelium neuropeptide-like receptor (SENR), and their amides, esters and salts. SENR is a G-protein coupled receptor protein (also known as GPR14), and the peptides which are ligands for it are forms of the peptide hormone urotensin II. The peptides can be used in the treatment and diagnosis of hypertension and kidney disease, and the development of drugs which are regulators of central functions, circulatory functions, heart functions, immune system functions, digestive functions, metabolic functions and genital functions. The present sequence represents a specifically claimed pig SENR ligand protein sequence, from the
                                                                                                                                                                                                                                                                                                                                                                                                                                       30-NOV-1998;
04-FEB-1999;
26-AUG-1999;
                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SENR; sensory epithelium neuropeptide-like receptor; urotensin II; diagnosis; G protein-coupled receptor; hypertension; GPR14; hormone; kidney disease; regulator; central function; circulatory function; heart function; immune system function; digestive function;
                                                                                        present invention.
                                                                                                                                                                                                                                                            Clalm 4; Page 134; 147pp; Japanese
                                                                                                                                                                                                                                                                                                     Urotensin peptides which are ligands for sensory epithelium neuropeptide-like receptor (SENR) for diagnosis and treatment
                                                                                                                                                                                                                                                                                            hypertension
                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-412287/35
                                                                                                                                                                                                                                                                                                                                                                                Mori M,
                                                                                                                                                                                                                                                                                                                                                                                                         (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200032627-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             metabolic function; genital function
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB12496 standard; Protein; 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sus scrofa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  27-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB12496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                118 WKYCV 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SENR ligand protein sequence SEQ ID NO:18
                Similarity
                                                                                                                                                                                                                                                                                                                                                                                Abe M,
                                                            121 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                    99JP-0239367
                                                                                                                                                                                                                                                                                                                                                                                                                                                       99JP-0026848
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98JP-0338984
                                                                                                                                                                                                                                                                                                                                                                             Shimomura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-JP06649
              52.3%;
                                                                                                                                                                                                                                                                                                                                                                               ۲,
Score 342.5;
Pred. No. 1.5e
l2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                             Sugo T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                             Kitada
                            DB 21;
                          Length 121;
                                                                                                                                                                                                                                                                                                      of.
```

Human Urotensin II partiai polypeptide sequence

```
This is a partial human Urotensin II polypeptide sequence. This sequence was identified prior to the identification of the full length sequence AN228381. This partial sequence was derived from EST (Expressed Sequence Tay) sequences. Urotensin II is the most potent mammalian vasoconstrictor identified to date. The invention relates to Urotensin II polypeptides and polynucleotides, which can be used to generate the introduces of the invention can be used to identify agonists and polynucleotides of the Urotensin II. The polypeptides and polynucleotides of the Urotensin II. The polypeptides and the urotensin II polypeptide. Urotensin II induces systemic vasoconstriction, myocardial contractile dysfunction, and the urotensin polypeptides are used to treat the polynucleotides, agonists, antagonists and antibodies are used to treat diseases, including ischaemic coronary artery disease; atherosclerosis; contension; hypotension; pulmonary disease; fibrotic vasculopathies; cancer; autolumnne diseases, fibroproliferative disorders; nain:
               Query Match
Best Local
 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 04-FEB-1998;
20-FEB-1998;
05-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  myocardial contractile dysfunction; lethal arrhythmia; asthma; allergy ischaemic coronary artery disease; atherosclerosis; metabolic disease; restenosis; hypertension; hypotension; pulmonary disease; cancer; cerebrovascular event; neurogenic inflammation; migraine; pain; autoimmune disease, fibroproliferative disorder; renai failure; microbial infection; viral infection; eating disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cuip JS,
Arnold AF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (SMIK
(SMIK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-JUL-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WQ9935266-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    HOMO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Huntington's disease; Gilles de la Tourette's syndrome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   09-JAN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  08-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 14; Page 28; 39pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New human Urotensin II polypeptides and polynucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-PSDB; AAZ28382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 1999-590681/50
                                                                                          eating disorders; asthma; aliergles; Huntington's disease or Gilles Tourette's syndrome. The polynucleotide is also useful as a source oprimers and probes, and also for detecting the above diseases.
                                                                 Sequence
                                                                                                                                                renal failure and glomerulopathies; microbial and viral infections; pain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AR,
   96;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SMITHKLINE BEECHAM CORP.
SMITHKLINE BEECHAM PLC.
SMITHKLINE BEECHAM LAB PHARM
                  Slmilarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 McNulty DE,
                                                                   103 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Khandoudi
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                systemic vasoconstrictor; antibody; agonist; antagonist;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0073616.
98US-0027381.
99US-0225747.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98US-0072383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US00489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers 4..315
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /product= Human_Urotensin_II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /*tag=
                76.0%;
87.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ŗ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ellis CE,
N, Gout B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ø
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORP.
   2;
Score 498; DB 20;
Pred. No. 4.6e-51;
2; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Douglas SA, Willette RN, Al-barazanji K;
   4.
                                   Length 103
   8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Aiyar NV;
 Gaps
```

δÃ

15

LNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSS 74

ω

```
RESULT 12
AAB12501
ID AAB12
XX AAB12501
XX AAB12
XX AAB12
XX AAB12
XX AAB12
XX SENR
KW Gilag
KW Kidiag
KW heal
KW heal
KW heal
XX Mett
XX Mett
XX Mett
XX Mo2
PN WO2
XX MO2
YX MO2
XX MO2
YX MO2
XX MO2
YX MO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
В
                                               Š
                                                                                                        Ъ
                                                                                                                                                          δÃ
                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                              Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             30-NOV-1998;
04-FEB-1999;
26-AUG-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SENR; sensory epithelium neuropeptide-like receptor; urotensin II; diagnosis; G protein-coupled roceptor; hypertension; GPR14; hormone kidney disease; regulator; central function; circulatory function; heart function; immune system function; digestive function; metabolic function; genital function.
                                                                                                                                                                                                                                                                                                                                                                             The present invention provides peptides which are ligands for sensory epithelium neuropeptide-like receptor (SENR), and their amides, esters and salts. SENR is a G-protein coupled receptor protein (also known as GPRI4), and the peptides which are ligands for it are forms of the peptide hormone urotensin II. The peptides can be used in the treatment and diagnosis of hypertension and kidney disease, and the development of drugs which are regulators of central functions, circulatory functions, heart functions system functions, digestive functions, metabolic functions and genital functions. The present sequence represents a bovine SENR ligand protein from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB12501 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Orotensin peptides which are ligands for sensory epithelium neuropeptide-like receptor (SENR) for diagnosis and treatment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                08-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200032627-AL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bos taurus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bovine SENR ligand protein sequence SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB12501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               hypertension
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        neuropeptide-like receptor (SENR)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-412287/35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 36;
                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ν
60
                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
GAETGEGLRNTDPITNIFYPRGNMRK--AFSGQDPKLFLSDLLSRIRKQSKKRGPSSECF
                                                                                                                                      MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                  MYKLVSCCLLFIGSLNPLLSLPVLDSRQESLQLLAP-EDVRSTLDELERASLLQMLPEMS 59
                                                                                                                                                                                                                           86;
                                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                      122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ,
M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Page 140-141; 147pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first
                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          98JP-0338984.
99JP-0026848.
99JP-0239367.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99WO-JP06649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Shimomura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Protein; 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         entry)
                                                                                                                                                                                                                                              61.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ķ
                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                              Score 402; DB 21;
Pred. No. 1.4e-39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sugo T,
                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ID NO:29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        K1tada
                                                                                                                                                                                                                                                                             DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        a
                                                                                                                                                                                                                                                                             Length 122;
                                                                                                                                                                                                                              Indeis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     hormone;
                                                                                                                                                                                                                           4 ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    O.
                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S
S
```

```
RESULT 10
AAY39390
DЪ
                                                                                                                                                                                                                                                                                                                                                                                                             SON COCCOCCXXX
                                                                                                                                                                                                                                                            맑
                                                                                                                                                                                                                                                                                   Ş
                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                            Matches
                                      myocardial contractile dysfunction; lethal arrhythmia; asthma; allergy ischaemic coronary artery disease; atherosclerosis; metabolic disease; restenosis; hypertension; hypotension; pulmonary disease; cancer; cerebrovascular event; neurogenic inflammation; migraine; pain; autoimmune disease fibronoliforation disease;
                     autoimmune disease, fibroproliferative disorder, microbial infection; viral infection; eating disc
                                                                                          Urotensin II; systemic vasoconstrictor;
                                                                                                                    Human Urotensin
                                                                                                                                               20-DEC-1999
                                                                                                                                                                                              AAY39390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                The present sequence represents a human pro-urotensin II polypeptide. In mammals, urotensin II promotes survival and regeneration of motor neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia,
                                                                                                                                                                                                                                                                                                                                                                                                                                           para plegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New mammalian urotensin II polypeptide, useful for treating neurodegeneration and spinal cord injury - \,
                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                    antinypertensive agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Beauvillain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (INRM ) INST NAT SANTE & RECH MEDICALE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200031265-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amyotrophic lateral
                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                                                     81
                                                                                                                                                                                                                                                                                                                  21 LPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNP 80
                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                      RGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFWKYCV
                                                                                                                                                                                                                                                                                                     LPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSSTNIFNP
                                                                                                                                                                                                                                                                             RGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-400075/34.
                                                                                                                                                                                                                                                                                                                                                              104;
                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                              standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Page
                                                                                                                                                                                                                                                                                                                                                                                                             104
                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                             AA
                                                                                                                  II polypeptide 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98FR-0014914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-FR02941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Coulouarn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note=
94..104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              42pp;
                                                                                                                                                                                             Protein;
                                                                                                                                                                                                                                                                                                                                                                     83.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  sclerosis; antihypertensive agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "pro-segment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ķ
                infection; eating disorder;
                                                                                                                                                                                             139
                                                                                                                                                                                                                                                                                                                                                           0,
                                                                                                                                                                                                                                                                                                                                                                                 Score 549;
                                                                                                                                                                                                                                                                                                                                                           Pred. No. 4.3e-57;
Mismath
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Jegou S,
                                                                                                                                                                                                                                                                                                                                                        Mismatches
   Tourette's syndrome
                                                                                      antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lihrmann
                                                                                                                                                                                                                                                                                                                                                        0,
                             renal
                                                                                                                                                                                                                                                                                                                                                                              Length 104;
                                                                                                                                                                                                                                                       104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ţ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          H
                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vaudry H;
                                                                                                                                                                                                                                                                                                                                                      0
                                                                        allergy;
                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                      0,
```

```
δÃ
                              Matches
                                             Query Match
Best Local
                                                                                                                                                          systemic vasoconstriction, myocardial contractile dysfunction, and ultimately, lethal arrhythmias. Urotensin polypeptides and polynucleotides, agonists, antagonists and antibodies are used to treat diseases; including ischaemic coronary artery disease; atherosclerosis; metabolic diseases; CHF/myocardial dysfunction; arrhythmias; restenosis; hypertension; hypotension; pulmonary disease; fibrotic vasculopathies; cerebrovascular events; neurogenic inflammation/migraine; haematopoietic disorders; cancer; autoimmune diseases, fibroproliferative disorders;
                                                                                                                                                                                                                                                                        the most potent mammalian vasoconstrictor identified to date. This sequence shows homology with Carp Urotensin II ralpha. The invention relates to Urotensin II polypeptides and polynucleotides, which can be used to generate antibodies specific for Urotensin II. The polypeptides and polynucleotides of the invention can be used to identify agonists are antagonists of the Urotensin II polypeptide. Urotensin II induces antagonists of the Urotensin II induces
                                                                                                      renal failure and glomerulopathies; microbial and viral infections; eating disorders; asthma; allergies; Huntington's disease or Gilles Tourette's syndrome. The polynucleotide is also useful as a source coprimers and probes, and also for detecting the above diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     09-JAN-1998;
04-FEB-1998;
20-FEB-1998;
                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (SMIK )
                                                                                                                                                                                                                                                                                                                                                                           This
                                                                                                                                                                                                                                                                                                                                                                                                       Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Culp
                                                                                                                                                                                                                                                                                                                                                                                                                             New human Urotensin II polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Arnold
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    W09935266-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              08-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15-JUL-1999
                             106;
                                                                                                                                                                                                                                                                                                                                                                    is the human Urotensin II polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1999-590681/50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AR,
                                        Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SMITHKLINE BEECHAM
SMITHKLINE BEECHAM
SMITHKLINE BEECHAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     McNulty DE,
, Khandoudi
                                                                                    139
                             Conservative
                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98US-0073616
98US-0027381
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US00489
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99US-0225747
                                                                                                                                                                                                                                                                                                                                                                                                 39pp; English
                                       81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ellis CE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gout B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CORP
PLC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LAB
                          2:
                                       Score 533.5;
Pred. No. 4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PHARM
                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Douglas SA, Wil
Al-barazanji K;
                                                                                                                                                                                                                                                                                                                                                                                                                             and
                       4.3e-55;
ches 12;
                                                                                                                                                                                                                                                                                                                                                                                                                             polynucleotides
                                                    DB
                                                20;
                                                                                                                                                                                                                                                                                                                                                                    sequence. Urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Willette RN,
                                                   Length
                                                   139;
                       <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Aiyar NV;
                    Gaps
                                                                                                                         of
                                                                                                                                                                                                                                                                                              and
                     2
```

```
RESULT 11
AAY39391
 AAY39391 standard;
                                                                             135
                                                                                                       120 WKYCV
                                                                                                                                      75
                                                                                                                                                                   60
                                                                                                                                                                                         18 HKSTSLC---FGHFNSYPSLPLIHDLLLEISFQLSAPHEDARLTPEELERASLLQILPEM
                                                                                                                                                                                                                   2 YKLASCCLLFIGFLNPLLSLPLLDS--REISFQLSAPHEDARLTPEELERASLLQILPEM 59
                                                                                                                                                          LGAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCF
                                                                           WKYCV 139
                                                                                                                                124
Protein; 103
AA.
```

Q

В

Вþ Q Ър

DXXXI

20-DEC-1999

(first entry)

```
RESULT 8
AAU81965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  р
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRO polypeptides are useful in gene therapy, and as molecular weight markers for protein electrophoresis purposes. The sequences may also be used to detect overexpression on PRO polypeptides in cancerous tumours and for screening for differentially expressed genes using
11-FEB-2000;

18-FEB-2000;

22-FEB-2000;

24-FEB-2000;

02-MAR-2000;

15-MAR-2000;

30-MAR-2000;

17-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          microarray technology. The present sequence represents a human PRO protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reaction, to generate transgenic animals or knock-out animals which in turn are useful in the development and screening of therapeutically useful reagents, for chromosome identification, and tissue typing. The
                                                                                                                                                                   28-JUL-1999;
13-SEP-1999;
15-SEP-1999;
29-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                          Human; PRO; antilnflammatory; ophthalmological; vasotropic; retlnal cell injury; ocular disease; retinitis pigmentosa; macular degeneration; retinal detachment; retinal tear; retinopathy; retinal degenerative disease; macular hole; degenerative myopia; acute retinal necrosis syndrome; traumatic chorioretinopathy; purtscher's retinopathy; oedema; ischaemic condition;
                                                                                                                                                                                                                                                                                                                                                        systemic lupus
                                                                                                                                                                                                                                                                                                                                                                     retinal vision occlusion; collagen vascular disease; thrombocytopaenic purpura; uveitis; retinal vasculitis; Eales disease;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Human PRO1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             09-APR-2002 (flrst entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU81965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU81965 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                 WO200109327-A2
                                                                                                              05-JAN-2000;
06-JAN-2000;
                                                                                                                                                                                                                                                                      08-FEB-2001
                                                                                                                                         01-DEC-1999;
                                                                                                                                                                                                                                           28-JUL-2000; 2000WO-US20710
                                                                                                                                                         30-NOV-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Slmilarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
            99WO-US28301.
2000WO-US00375.
2000WO-US00375.
2000WO-US034341.
2000WO-US04414.
2000WO-US04414.
2000WO-US05841.
2000WO-US05841.
2000WO-US058439.
                                                                                                                                                                                                                                                                                                                                                        erythematosus; environmental trauma.
                                                                                                                                                                                    99WO-US21090
                                                                                                                                                                                                               99US-146222P
                                                                                                                                                                         99WO-US28214
                                                                                                                                                                                                   99WO-US20944
                                                                                                                                                         99WO-US28313
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 650; DB 23;
Pred. No. 5.8e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               therapeutically therapeutically
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
```

```
RESULT 9
AAY93640
                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                     ρ
                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                       В
     cencoding the PRO proteins, a vector comprising the nucleic acid, a host cell comprising the vector, and anti-PRO antibody. The PRO proteins are consecutive promoting survival of retinal cells (retinal neurons such as retinal ganglion cells, displaced retinal ganglion cells, amacrine cells, or retinal ganglion cells, and retinal ganglion cells, amacrine cells, or or proteins are consecutive cells, or proteins as willer cells or pigment cepthelial cells, or delaying or preventing retinal cells or pigment cepthelial cells), or delaying or preventing retinal cell injury or centinitis pigmentosa, macular degeneration, retinal detachment, retinal certinal cells or pigment certinal retinopathy, retinal degenerative disease, macular hole, central retinopathy or contusion, purtsofar's retinopathy, central or branch retinal vision occlusion, contral or branch retinal vision occlusion, retinal disease, thrombocytopaenic purpura, uveitis, retinal cells, occlusion, and constituted with Eales disease or systemic lupus constituted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Promoting survival of retinal cells, or delaying or preventing retinal cell injury or death, by contacting retinal cells with PRO175, 220, 216, 243, 306, 346, 322, 536, 943, 840, 828, 826, 1068 or PRO1132
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             erythematosus), retinal injury or environmental trauma. The retinal cell injury or death is delayed or prevented by substantially not causing angiogenesis or mitogenesis. The present sequence represents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          delaying or preventing retinal cell injury or death, by contacting the retinal cells with the polypeptide such as PRO175, PRO230, PRO216, PRO3243, PRO306, PRO346, PRO322, PRO536, PRO943, PRO840, PRO828, PRO826, PRO1068 or PRO1132 polypeptide. Also included are the nucleic acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim 44; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N-PSDB; ABK28601.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2002-130120/17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kljavin IJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to promoting the survival of retinal cells, delaying or preventing retinal cell injury or death, by contacting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ashkenazi AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GETH ) GENENTECH INC
Urotensin II; motor
spinal cord trauma;
                                                   Amino acid sequence of a human pro-urotensin II (UII) polypeptlde
                                                                                                                           AAY93640
                                                                                                                                                           AAY93640 standard; Protein;
                                                                                    25-SEP-2000
                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                   121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                    19
                                                                                                                                                                                                                                                                                                                                                                                       \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                         Н
                                                                                                                                                                                                                                                                                                                 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                     MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lafleur M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wood WI;
                                                                                      (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    27; 152pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baker KP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AA,
                                                                                        entry)
 neuron; hypertensive; neurodegeneration
hemi-plegia; para-plegia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mark MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                              104
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 650; DB 23;
Pred. No. 5.8e-69;
0; Mismatches 1;
                                                                                                                                                              ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Marsters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pltti RM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   h, by contacting PRO220, PRO216,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      or.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0;
```

```
Вþ
                                                                                                    δÃ
                                                                                                                                                   밁
                                                                                                                                                                                         δÃ
                    δÃ
                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  30-NOV-1999

01-DEC-1999

09-DEC-1999

20-DEC-1999

20-DEC-1999

20-JAN-2000

05-JAN-2000

11-FEB-2000

11-FEB-2000

12-FEB-2000

22-FEB-2000

24-FEB-2000

24-FEB-2000

20-MAR-2000

21-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                         immune-mediated renal disease, demyelinating diseases of the central and peripheral nervous systems (such as multiple sclerosis, idiopathic demyelinating polyneuropathy or Guillain-Barre syndrome, and chronic inflammatory demyelinating polyneuropathy), hepatobiliary diseases (such as infectious, autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis and sclerosing cholangitis), inflammatory bowel disease, glutter-sensitive enteropathy and Whipple's disease, autoimmune or immune-mediated skin diseases (such as bullous skin diseases, erythema multiforme, contact dermatitis, psoriasis), allergic diseases such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria), immunological diseases of the lung (such as eosinophilic pneumonias, idiopathic pulmonary fibrosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ashkenazi
Hebert C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               antagonists are useful for treating and diagnosing immune related disorders such as systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, juvenile chronic arthritis, spondyloarthropathies, systemic sclerosis, idiopathic inflammatory myopathies, Sjogren's systemic sclerosis, idiopathic inflammatory myopathies, Sjogren's syndrome, systemic vasculitis, sarcoidosis, autoimmune haemolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Thirty three nucleic acids encoding PRO polypeptides which are useful in the diagnosis and treatment of immune related disorders, e.g. systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis, thyroiditis and diabetes mellitus -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence is one of thirty three novel PRO polypeptides The PRO polypeptides, anti-PRO antibodies, agonists and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            30-MAR-2000;
17-MAY-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 58; Fig 36; 218pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 anaemia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (GETH )
                                                                                                                                                                                                                                                                                                                               Sequence
                      121
                                                                61
                                                                                                         19
                                                                                                                                                 hypersensitivity pneumonitis), transplantation associated diseases luding graft rejection and graft-versus-host diseases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2001-025253/03.
DB; AAC91478.
                                                            GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                      KYCV 124
                                                                                                                                                                                                                                          123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENENTECH INC.
                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 autoimmune thrombocytopaenia, thyroiditis, diabetes mellitus,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AJ, Baker KP,
Henzel W, Ka
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2000WO-US00219.
2000WO-US00376.
2000WO-US03565.
2000WO-US04341.
2000WO-US04414.
2000WO-US04914.
2000WO-US06884.
2000WO-US05884.
2000WO-US07377.
2000WO-US07532.
                                                                                                                                                                                                                                                                                                                               124
                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000WO-US14042
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000WO-US08439.
2000WO-US13705.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   99WO-US28313.
99WO-US28634.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99WO-US30911
                                                                                                                                                                                                                                                                                                                               AA;
                                                                                                                                                                                                                                                                 99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KP, Chan B,
Kabakoff RC,
                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                        Score 650; DB Pred. No. 5.8e 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard A, (
Shelton DL,
                                                                                                                                                                                                                                                                 DB 22;
.8e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski PJ, Gurney AL;
,, Tumas D, Watanabe CK;
                                                                                                                                                                                                                                                                                   Length 124;
                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                             Gaps
                                                                                                                                                        60
                                                                                                                                                                                                  60
                                                                                                                                                                                                                                             0;
  RESULT 7
ABG34042
ID ABG34042
XX
XX
AC ABG3
XX
XX
AC ABG3
XX
XX
AC ABG3
XX
XX
AC ABG3
AC ABG3
XX
AC ABG3
AC ABG3
AC ABG3
XX
AC ABG3
AC 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       genetic
This invention relates to the cDNA and protein sequences of novel secreted and transmembrane polypeptides PRO polypeptides. The invention also comprises a method for producing the proteins of the invention by recombinant means and antibodies specific for the protein of the invention. The antibody may be used for detecting the PRO proteins of the invention and may be used to modify their activity. polynucleotides may be used as hybridisation probes for a cDNA library to isolate the full-length PRO cDNA or to isolate other CDNAs, to construct hybridisation probes for mapping the gene which encodes that PRO and for genetic analysis of individuals with genetic disorders, in assays to identify other proteins or molecules involved in binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney
Fong S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ABG34042;
                                                                                                                                                                                                                                                                                                           New PRO polypeptides and polynucleotides encoding the polypeptides, useful in gene therapy, chromosome identification, tissue typing, or for genetic analysis of individuals with genetic disorders \dot{}
                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-362426/39.
N-PSDB; ABK69973.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baker KP,
                                                                                                                                                                                                                                                                     Claim 11; Figure 26; 218pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ΑL,
```

2;

```
25-JAN-2001

02-FEB-2001

09-FEB-2001

28-FEB-2001

09-MAR-2001

04-APR-2001

04-APR-2001

04-APR-2001

09-MAY-2001

01-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                   01-SEP-2000;
05-SEP-2000;
22-SEP-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Human Pro peptide #13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ABG34042 standard; Protein; 124 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200224888-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-JUL-2002 (first entry)
                                                                                                                                                                                                                                                                                                      16-JAN-2001;
                                                                                                                                                                                                                                                                                                                      16-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                 29-AUG-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      121 KYCV 124
                                                                                                                                                                                                                                                                                          16-JAN-2001;
                                                                                                                                                                                                                                                                                                                                                     10-NOV-2000;
                                         (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       disorder;
Eaton DL,
Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     secreted protein; transmembrane
                                                                                                    2000WO-US30873.
2001US-261978P.
2001US-261939P.
2001US-264395P.
2001US-264395P.
2001US-264395P.
2001US-267623P.
2001US-27623P.
2001US-277623P.
2001US-274399P.
2001US-2782139P.
2001US-282139P.
2001US-282139P.
2001US-282139P.
2001US-290589P.
2001WO-US17800.
2001WO-US17800.
2001WO-US17805.
                                                                                                                                                                                                                                                                                                                                                                                                    2000US-229896P
                                                                                                                                                                                                                                                                                                                                                                                                                                 2001WO-US27099
                                                                          2001WO-US21066
2001WO-US21735
                                                                                                                                                                                                                                                                                                                                                                     2000US-230621P
2000US-235147P
Filvaroff E, Goddard A, Stephan J, Watanabe CK,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein;
   Grimaldi JC;
Wood WI, Zhang
```

```
RESULT 5
AAB65230
ID AAB6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                         08-OCT-1999
30-NOV-1999
01-DEC-1999
16-DEC-1999
20-DEC-1999
20-DEC-1999
20-JAN-2000
05-JAN-2000
06-JAN-2000
11-FEB-2000
11-FEB-2000
22-FEB-2000
                                                                                                                                                                                                                                                 20-JUL-1999;
26-JUL-1999;
28-JUL-1999;
17-AUG-1999;
                                          Grimaldi
                                                   Ferrara N,
                                                           Ashkenazi AJ,
                                                                                                      02-MAR-2000;
15-MAR-2000;
                                                                             (GETH ) GENENTECH INC.
                                                                                                                                                                                                                                 15-SEP-1999;
15-SEP-1999;
                                                                                                                                                                                                                                                                                     23-JUN-1999;
07-JUL-1999;
                                                                                                                                                                                                                                                                                                                      30-MAR-2000;
                                                                                                                                                                                                                                                                                                                                       07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                         WO200073454-A1
                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                          diagnostic assay.
                                                                                                                                                                                                                                                                                                                                                                                                        Human; secreted and transmembrane protein; PRO; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                         Human PRO1068 (UNQ525) protein sequence SEQ ID NO:266
                                                                                                                                                                                                                                                                                                                                                                                                                                             02-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB65230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAB65230 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \vdash
       2001-032160/04
                                                                                                                                                                                                                                                                                                                                                                                                   death;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MYKLASCCLLFIGFLNPLLSLPLLDSREISFOLSAPHEDARLTDEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MYKLASCCLLfTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123;
                                          Ç,
                                 Stewart TA,
                          CJ, Gurney AL, Klj;
                                                                                                             2000WO-US00376
2000WO-US00376
2000WO-US03565
2000WO-US04341
2000WO-US04414
2000WO-US04414
2000WO-US05004
2000WO-US05004
                                                                                                                                                                                                                                                                                                                                                                                             cancer; chromosomal mapping; gene mapping; tissue typing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                            2000WO-US06884
2000WO-US07377
                                                                                                                                                                                                                                                                                                                     2000WO-US08439
                            Baker KP, Botstein D, Desnoyers L, Eaton
ng S, Gerber H, Gerritsen ME, Goddard A,
Gurney AL, Kljavin IJ, Napier MA, Pan J,
rt TA, Tumas D, Watanabe CK, Williams PM,
                                                                                                                                                                                                                                                                          99WO-US12252.
99US-0141037.
99US-0143048.
99US-0144758.
                                                                                                                                                                                           99WO-US28301.
99WO-US30095.
                                                                                                                                                                                    99WO-US30911
                                                                                                                                                                                                             99US-0158663.
99WO-US28313.
                                                                                                                                                                                                                              99WO-US21090
99WO-US21547
                                                                                                                                                                                                                                                99US-0149396
                                                                                                                                                                                                                                                         99US-0145698.
99US-0146222.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 5.8e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                             Paoni
Wood
                                               Godowski PJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

N-PSDB; AAF44193

```
RESULT 6
AAB50919
ID AAB5
XX AAB5
AC AAB5
XX 21-M
AC AAB5
XX Huma
XX Huma
XX Huma
XX Huma
XX Anti
KW Anti
KW Anti
KW Anti
KW Anti
KW Anti
XW Hepa
XX Homo
OS Homo
OS Homo
OS Jefo
OJ -D
XX OJ -J
PR 02-J
PR 20-J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ouery Match
Best Local
                                    02-JUN-1999
20-JUL-1999
20-JUL-1999
20-JUL-1999
28-JUL-1999
01-SEP-1999
15-SEP-1999
                                                                                                                                                                                                                                                                                                                Human; PRO; antiinflammatory; dermatological; antiarthritic; antirheumatic; cardiant; antianaemic; immunosuppressive; antithyroid; antidiabetic; nootropic; neuroprotective; hepatotropic; virucide; antiallergic; antiasthmatic; immune related disorder; hepatobiliary disease; autoimmune disease; allergy.
                                                                                                                                                                                                                07-DEC-2000
   15-SEP-1999;
29-OCT-1999;
                                                                                                                                                                           02-JUN-2000;
                                                                                                                                                                                                                                                   WO200073452-A2
                                                                                                                                                                                                                                                                                         Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                        Human PRO1068 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21-MAR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB50919 standard; Protein; 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The present invention describes human secreted and transmembrane proproteins. The PRO proteins have cytostatic activity. The PRO proteins can be used for targeted delivery of bloactive molecules, such as toxins, radiolabels or antibodies, that cause cell death, PRO nucleotide sequences, and their fragments, can be used as hybridisation probes, in chromosomal and gene mapping, and in the generation of anti-sense RNA and DNA. They may also be used to produce transgenic animals which are used to develop and screen therapeutically useful reagents. The PRO nucleotide and protein sequence can be used for tissue typing and in treating cancer. Anti-PRO antibodies can be used in diagnostic assays.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAF44270 to AAF44470 represent PCR primers and hybridisation probes used in the isolation of human PRO sequences. AAF44087 to AAF4269 and AAB65154 to AAB65300 represent human PRO polynucleotide and protein sequences given in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 12; Fig 184; 935pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRO polynucleotides used bioactive molecules such
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      specific cells, to cause
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAERGDILRKADSSTNIFNPRGNLRKFODFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          124 AA;
                                                                                                                                                                       2000WO-US15264
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
99WO-US21090.
99WO-US21547.
99US-0162506.
                                                       99WO-US12252.
99US-0144732.
99US-0144758.
99US-0146222.
99WO-US20111.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99.2%;
99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      to produce polypeptides used to target as toxins, radiolabels or antibodies, targeted cell death -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  targeted cell death
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 650; DB 22;
Pred. No. 5.8e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   င်
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
```

F77777777777

```
RESULT 4
AAB20118
                                                                                                                                                                                                                                                                                                                                                                                                                 Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                         QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20
                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                           맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Baker K,
Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      molecules are useful as pharmaceutical and diagnostic agents. Receptor immunoadhesins, for instance, can be used as therapeutic agents to block receptor-ligand interactions. The membrane-bound proteins can also be employed for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interaction. The PRO encoding sequences are useful as hybridization probes, in chromosome and gene mapping and in the generation of antisense RNA and DNA. PRO nucleic acid sequences will also be useful for the preparation of PRO polypeptides, especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequences have homology with proteins including LDL receptors, TIE ligands and various enzymes. The membrane-bound proteins and receptor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16-SEP-1998;
12-JAN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          polynucleotides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The invention provides membrane-bound PRO polypeptides and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    claim 12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Membrane-bound proteins and related nucleotide sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAZ65047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-072883/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polynucleotides encoding them. The PRO sequences of the invention were identified based on extracellular domain homology screening. The PRO
                                                                                                                                                                                                      Human immunostimulant PRO1068
                                                                                                                                                                                                                                    30-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                        AAB20118 standard; Protein; 124 AA
                                                                    Key
                                                                                                                          antiasthmatic;
                                                                                                                                                                              PRO1068; UNQ525; human; immune disease; autoimmune disease;
                                                                                                                                                                                                                                                              AAB20118;
 Modified-site
                            Protein
                                                                                              Homo sapiens
                                                                                                                                     antirheumatic; antiarthritic; antiinflammatory; antianaemic;
immunosuppressive; antithyroid; antidiabetic; neuroprotective;
hepatotropic; virucide; dermatological; antipsoriatic;
                                                     Peptide
                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                      121 KYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                               recombinant techniques.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chen
Yuan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Fig 184; 822pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ç, ç,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0100634.
99US-0115565.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                          antiallergic;
 /label= Signal_peptide
21..124
/label= Mature_protein
61..67
                                                                   Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 650; DB 21;
Pred. No. 5.8e-69;
0; Mismatches 1;
                                                                                                                           immunostimulant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0
```

```
cc renal disease, demyelinated diseases (such as multiple sclerosis),
cc autoimmune chronic active hepatitis, primary bilitary cirrhosis,
cc granulomatous hepatitis, sclerosing cholangitis, inflammatory bowel
cd disease (ulcerative colitis and Crohn's disease), gluten sensitive
enteropathy, Whipple's disease, (auto)immune-mediated skin diseases
cc such as bullous skin disease, erythema multiforme and psoriasis),
cl allergic diseases (such as asthma, allergic rhinitis, atopic
cd dermatitis, food hypersensitivity and urticaria), immunologic
cd diseases of the lung and transplantation associated diseases (such
cas graft rejection and graft-versus-host disease) (all claimed),
cas graft rejection and graft-versus-host disease) (all claimed);
cc claimed methods of diagnosing these disorders comprise detecting
cf the level of expression of the PRO gene. Also claimed are a method
cof identifying a compound capable of inhibiting the expression or
cactivity of the PRO polypeptide, vectors, host cells, antibodies,
cand a method of stimulating the proliferation of T lymphocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (UNU) 23), as deduced from cDNA (see AAF30060) isolated from a database screening. PRO1068 has a mol.wt. of 14 kDa and a pI of 8.14. The invention provides polynucleotides (see AAF30050-62) encoding novel human PRO proteins (see AAF30108-20) including PRO1068. Claimed compositions comprising these proteins or their agonists are useful for increasing infiltering for increasing increasing infiltering for increasing infiltering for increasing incre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          a PRO polypeptide or its antagonist have the opposite effect. A claimed method for treating an immune related disorder, such as a T cell disorder, involves administering a PRO polypeptide, an agonist antibody or an antagonist antibody. The disorder is selected from systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            agonists are useful for increasing infiltration of inflammatory cells into a tissue of a mammal, stimulating or enhancing an immune response, or increasing the proliferation of T-lymphocytes in a mammal in response to an antigen. Claimed compositions comprising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New PRO polypeptides, nucleic acids and (ant)agonists, useful for diagnosing and treating immune-related disorders, such as multiple sclerosis, rheumatoid arthritis and diabetes -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is that of novel human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 20; Fig 22; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  N-PSDB; AAF30060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-103149/11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wood WI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hillan KJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ashkenazi AJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-MAR-2000; 2000WO-US06884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200105972-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           idiopathic inflammatory myopathy, Sjogren's syndrome, systemic vasculitis, sarcoidosis, autoimmune haemolytic anaemia, autoimmune thrombocytopaenia, thyroiditis, diabetes mellitus, immune-mediated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        uvenile chronic arthritis, spondyloarthropathy, systemic sclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mark MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             99US-0144758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "N
112..116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note=
64..67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note= "N-myristoylation site" 92...98
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         118..124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "cell attachment sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           r KP, Fong
, Marsters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "N-myristoylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "urotensin II signature"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "cAMP- and cGMP-dependent protein kinase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      phosphorylation site"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard
Pitti R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RM,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    immunomodulator PRO1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowski
Tumas D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gurney AL;
anabe CK;
```

סי ס	**************************************	O X K K X
	WO9963088-A2 09-DEC-1999 02-JUN-1998 02-JUN-1998 02-JUN-1998 04-JUN-1998 04-JUN-1998 04-JUN-1998 04-JUN-1998 04-JUN-1998 04-JUN-1998 04-JUN-1998 04-JUN-1998 05-JUN-1998 05-JUN-1998 06-JUN-1998 06-JUN-1998 06-JUN-1998 06-JUN-1998 06-JUN-1998 06-JUN-1998 06-JUN-1998 06-JUN-1998 07-JUN-1998	∃ ≒
98US-0090246. 98US-0090252. 98US-0090349. 98US-0090355. 98US-0090429. 98US-0090421. 98US-0090425. 98US-0090435. 98US-0090445. 98US-0090445. 98US-0090445. 98US-00904472.	99WO-US12252 99US-0087607 99US-0087607 99US-008025 99US-008027	d polypeptide; PRO polypeptide; LDL receptor; TIE ligand; l; receptor immunoadhesin; gene mapping.
ק קק קק קק קקק קקק קקק קקק קקק קקק קקק	י י אַר פּר פּר פּר פּר פּר פּר פּר פּר פּר פּ	PR PR
20-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199 26-AUG-199	25-JUN-1998 RR 25-JUN-1998 RR 25-JUN-1998 RR 25-JUN-1998 RR 25-JUN-1998 RR 25-JUN-1998 RR 25-JUN-1998 RR 26-JUN-1998 RR 26-JUL-1998 RR 01-JUL-1998 RR 01-JUL-1998 RR 02-JUL-1998 RR 02-JUL-1998 R	24 - JUN-1 24 - JUN-1 24 - JUN-1 24 - JUN-1
000000000000000000000000000000000000000	98US-0090678 98US-0090678 98US-0090698 98US-0090699 98US-0090699 98US-0090696 98US-0090862 98US-0091478 98US-0091544 98US-0091526 98US-0091628 98US-0091628 98US-0091628 98US-0091628 98US-0091633 98US-0091628 98US-0091978 98US-0091978 98US-0095282 98US-0095282 98US-0095282 98US-0095282 98US-0096146 98US-0096143 98US-0095318 98US-0096146 98US-0096143 98US-0096768 98US-0096768 98US-0096779 98US-0096891 98US-0096891 98US-0096949 98US-0096949	

```
RESULT 2
AAY87319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              S X C C C C C C C X P X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X P X X 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       γQ
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Matches 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                               inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Human signal peptide containing protein HSPP-96 SEQ ID NO:96.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-plegia or amyotrophic lateral sclerosis). The polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               neurodegeneration
                                                                                                                                    WO200000610-A2
                                                                                                                                                                                                                                              muscular dystrophy
                                                                                                                                                                                                                                                                                                 cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia;
asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           are also used to screen for specific inhibitors, i.e.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence represents a human prepro-urotensin II polypeptide In mammals, urotensin II promotes survival and regeneration of motor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         New mammalian urotensin II polypeptide, useful for treating neurodegeneration and spinal cord injury -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (INRM ) INST NAT SANTE & RECH MEDICALE
                      25-JUN-1999;
                                                                             06-JAN-2000
                                                                                                                                                                                          Homo sapiens
                                                                                                                                                                                                                                                                           Parkinson's disease;
                                                                                                                                                                                                                                                                                                                                                        antiasthmatic; gene therapy; cell proliferation; neurological disorder; reproductive disorder; developmental disorder; arteriosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY87319 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000-400075/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  KYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     signal peptide-containing protein; HSPP; diagnosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Fig 2; 42pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AA;
                      99WO-US14484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Coulouarn Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99WO-FR02941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.
                                                                                                                                                                                                                                                                        Huntington's diseases;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 655;
Pred. No. 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lihrmann I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21;
1.5e-69;
es 0;
                                                                                                                                                                                                                                                                           ovulatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vaudry H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0,:
```

Membrane-bound

protein PRO1068

05-APR-2000 (first entry)

AAY66707 standard;

protein;

124

AΑ

```
RESULT 3
AAY66707
ID AAY'
XX
AC AP
XX
DT
DT
DE
                                                                                                                                                                                                                                                                       QY
                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                           Š
                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                       멍
                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      reproductive or developmental disorders, (e.g. arteriosclérosis, cirrhosis, psoriasis, acquired immune deficiency syndrome, anaemia, asthma, Crohn's disease, microbial or other infections, congestive or ischaemic heart disease, Alzheimer's, Parkinson's or Huntington's diseases, schizophrenia, ovulatory defects, muscular dystrophy). HSPP nucleic acids can be used for the recombinant production of HSPP, for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human signal peptide-containing proteins HSPP-1 to HSPP-134. HSPPs have anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic, neuroprotective, cardiovascular and antiasthmatic activities, and can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            New human signal peptide-containing proteins useful in treatment, prevention and diagnosis of e.g. cancer, inflammation and cardiovascular disease \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antagonists (potential therapeutic agent:
monitor, HSPP-related diseases (in usual
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or genetic variations, and for chromosomal mapping. HSPP are also raise specific antibodies (Ab) and to screen for agonists and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        diagnosis and monitoring), in gene therapy, as antisense, triplex forming or ribozyme therapeutics, for detecting r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      detecting HSPP in standard hybridisation and amplification assays (for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 1; Page 221-222;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-1998;
11-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-JUN-1998;
31-JUL-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antagonists, in competitive drug screens,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAZ98109 to AAZ98242 encode AAY87224 to AAY87357 which represent the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N-PSDB; AAZ98204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bandman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Akerblom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Lal P,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (including cancer), inflammation, cardiovascular, neurological
                                                                                                                                                                                121
                                                                                                                                                                                                             121
                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                      MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                             KYCV
                                                                                                                                                                                                                                                         GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                KYCV
                                                                                                                                                                                                                                          GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFW
                                                                                                                                                                                                                                                                                                       MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2000-160673/14.
                                                                                                                                                                                                                                                                                                                                                                     124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INCYTE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ε
                                                                                                                                                                                124
                                                                                                                                                                                                                                                                                                                                                                                                                                  124
                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YT,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sources.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Au-Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98US-0090762.
98US-0094983.
98US-0102686.
98US-0112129.
                                                                                                                                                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PHARM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gorgone (Young J,
                                                                                                                                                                                                                                                                                                                                                                                   100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          327pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GA,
Yue
                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                   Score 655; DB 21;
Pred. No. 1.5e-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Corley NC, Guegler KJ, Barth, Patterson C, Reddy R,
                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             agents). Ab are used

    Ab are used to diagnose, o
immunoassays), as therapeutic
, and for purification of HSPP

                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Baughn MR;
R, Hillman JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            related
                                                                                                                                                                                                                                                                                                                                                                                                  124;
                                                                                                                                                                                                                                                                                                                                                                   0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          sequences to
                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                   0
```

. 65

٠.

```
Title:
Perfect score:
Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Post-processing: Minimum Match 0%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
        Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                             Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4:
5:
6:
7:
7:
10:
11:
11:
11:
11:
11:
11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BLOSUM62.
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            March 10, 2003, 17:24:52; Search time 30.1622 Seconds (without alignments) 547.808 Million cell updates/sec
            100.0
100.0
99.2
99.2
99.2
99.2
99.2
99.2
83.8
81.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            655
1 MYKLASCCLLFIGFLNPLLS.....RIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           908470 seqs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-831-907A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1987.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1988.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA1989.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA199.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2000.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2001.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:

**SIDSZ/gcgdata/geneseq/geneseq-geneseqp-embl/AA2002.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:

**SIDSZ/gcgdata/geneseq/geneseqp-embl/AA2002.DAT:

**SIDSZ/gcgd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.3 Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1985.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1984.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
        21
21
22
22
23
23
21
20
                                                                                                                                                                                                                                                                                                                                                                                                                                                 ij
                                                AAY93639
AAY87319
AAY66707
AAB20118
AAB52019
AAB5230
AAB50919
ABG34042
AAU81965
AAY93640
            AAY39390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
Human Pro peptide
Human PRO1068. Ho
Amino acid sequenc
Human Urotensin II
                                                                                                                                                                                                                                Amino acid sequenc
Human signal pepti
Membrane-bound pro
Human immunostimul
                                                                                                                                                                                                                                                                                                                                                                                                                                         Description
                                                                                                                                                    Human PRO1068 (UNO Human PRO1068 prot
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The state of the s
```

Rat Urotensin II r	9770	22	11	11.3	74	5
Urotensin-II pepti	E0288	22	11	11.3	74	44
Amino acid sequenc	9364	21	11	11.3	74	ü
Human SENR ligand	49	21	11	•	74	2
nan	AAY39392	20	11		74	1
ŝ	AAG32972	21	534	11.4	4	
is thal	AAG49491	21	529	11.4	4	39
is thal	AAG32973	21	394		4	
thal	AAG49492	21	389	11.4		37
thal	AAG49493	21	328	11.4	4	36
thal	AAG32974	21	328	1.	4	35
	AAG42053	21	460	1	75	34
thal	AAG42054	21	393	1	75	ü
	AAG50956	21	391	11.5	75	32
tha 1	AAG42055	21	389	1	75	3
s thal.	AAG50957	21	324	۳	75	30
Arabldopsis thalia	AAG50958	21	320	-	75	29
••	AAR44751	14	484	1	76	28
	ABB63947	22	3726	2	79	27
phila	ABB64811	22	543	Ν.	9.	26
acid s	AAY93645	21	103	2	10.	25
Amíno acid s	AAY93648	21	103	32.6	213.5	24
sensory epit	AAU80116	23	85		15.	23
SENR Lig	AAB12497	21	85	2	15.	22
sensory epith	AAU80121	23	123	ω ·	82.	21
rotens	AAB60442	22	123	ω	82.	20
acld seque	AAY93644	21	123	ω.	282.	19
urotensin	AAU80124	23	123	ω	86.	.8
urote	AAB60445	22	123	ω.	86.	17:
no acid sequ	AAY93647	21	123	ω.	86.	16
sensory epi	AAU80115	23	121	2	42.	15
SENR ligand	AAB12496	21	121	Ñ	42.	14
nsory	8012	23	122	Ë	0	L L
e SEN	ŭ,	21	122	61.4	402	12
Human Urotensln II	ø	20	103	76.0	498	11

ALIGNMENTS

RESULT 1
AAY93639
ID AAY9

AAY93639 standard;

Protein; 124

A

```
/note= "encoded by GAC" Misc-difference 47
                                                                                                                                                                                        Urotensin II; motor neuron; hypertensive; neurodegeneration; spinal cord trauma; hemi-plegia; para-plegia; amyotrophic lateral sclerosis; antihypertensive agent.
                                                                                                                                                                                                   Urotensin II; spinal cord to
02-JUN-2000
                                             Peptide
                                                                Misc-dlfference 81
                                                                                                   /note=
Misc-difference 46
                                                                                                                                                     Key
                                                                                                                                                                                                                                                                     AAY93639;
                 WO200031265-A1
                                                                                                                         Peptide
                                                                                                                                                                                                                              Amino acld sequence of a human prepro-urotensin II (UII) polypeptide.
                                                                                                                                                                                                                                                25-SEP-2000 (first entry)
                                                                                                                                            Peptide
                                                                                                                                                                      Homo sapiens.
                                                                                                                       /note= "signal peptide" 21..110
                                                                                                                                           Location/Qualifiers
1..20
                                     /note-
                                                   /note= "encoded by ATT"
                                                                        note- "encoded by GTA"
                                              . 124
                                    "urotensin II"
                                                                                                             "pro-segment of urotensin
```

Search completed: March 10, 2003, 17:48:11 Job time: 12.3946 secs

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-07-841-646-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-08-449-699A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
FILING DATA:
CLASSIFICATION: 53U
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 810
                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NFORMATION FOR SEQ 1D NO: 15:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           tent No.
                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                             SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US 01 FILING DATE: 01-NOV-1993 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                   APPLICANT: PANG, ROY H.L.
TITLE OF INVENTION: OSTEOGENIC DEVICES
NUMBER OF SEQUENCES: 33
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEPHONE: 617/248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           186 FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             126 PRYHHREFRFDLSK1PEGEAVTAAEFRIYKDYIRERFDNETFRISVYQVLQEHLGRESDL 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                245 HGPQNKQPFMVAFFK 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               107 WKPYKKRETPDCFWK 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            62 ------AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPNILLSHLLARI 106
                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                     ADDRESSEE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 Similarity
34; Conserv
                                                                                                                                                                                                                    02109
                                                                                                                                                                                                                                                                    BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   : 408 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PITCHER, EDMUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/07841646
                                                                                                                                                                                                                                                 MASSACHUSETTS
                                                                                                                                                                                                                                                                                 E: TESTA, HURWITZ & THIBEAULT
53 STATE STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           617/248-7100
                                                                                                                                                                                                                                                                                                                                                                                                                       OPPERMANN, HERMI
OZKAYNAK, ENGIN
                                                                                                                                                                                                                                                                                                                                                                                    KUBERASAMPATH, THANGAVEL RUEGER, DAVID C.
                                                                                                                                                                                                                                  U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PatentIn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 24-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10.5%; Score 69; I
25.2%; Pred. No. 5.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Release #1.0, Version #1.25
                           US 810,560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 08/147,023
                                                                                             US/07/841,646
                                                                                                                                                                                                                                                                                                                                                                                                                                        HERMANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US/08/449,699A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27,829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STK-001CP6CN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
```

5

```
δÃ
                                                               DЪ
                                                                                            Qγ
                                                                                                                             DЬ
   B
                                                                                                                                                                                                                                                       ; MOLECULE TYPE: protein US-07-841-646-2
                                                                                                                                                                                                      Query Match
Best Local :
                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: CF
TELECOMMUNICATION 1NFORMATION:
TELEPHONE: 617/248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 422,613
                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 28-JAN-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                              107 WKPYKKRETPDCFWK 121
268 HGPQNKQPFMVAFFK 282
                                                                                                                        149 PRYHHREFRFDLSKIPEGEAVTAAEFRIYKDYIRERFDNETFRISVYQVLQEHLGRESDL 208
                                                            209 FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 267
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: UFILING DATE: 08-APR-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                       22 PLLDSREISFQLSAPHEDARLTPEELE ------RASLLQILPEMLG----
                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F1L1NG DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F1L1NG DATE:
                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                         -----AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPNILLSHLLARI 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CATION NUMBER:
                                                                                                                                                                                                        Similarity
                                                                                                                                                                                                                                                                                                 AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                PITCHER, EDMUND
                                                                                                                                                                                                                                                                                                                   431 amino acids
                                                                                                                                                                                                                                                                                                                                                                  617/
                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   07-SEP-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                    /248-7100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            23-FEB-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MBER: US 569,920
20-AUG-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   18-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              04-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-JAN-1992
                                                                                                                                                                                                      10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 179,460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 315,342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 599,543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 600,024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 621,988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 232,630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 483,913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 579,865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 616,374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 621,849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 827,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 660,162
                                                                                                                                                                                                                                                                                                                                                                                                                             27,829
                                                                                                                                                                                       15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                 CRP-001CP6
                                                                                                                                                                                                    Score 69; I
                                                                                                                                                                                                                     DB 1; Length 431;
                                                                                                                                                                                      50; Indels
                                                                                                                                                                                       36;
                                                                                                                                                                                      Gaps
                                                                                                                                                       61
```

В 20 DЬ 20

QY

```
; MOLECULE TYPE: US-08-447-570-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-449-700-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 10.5%; Score 69; I Best Local Similarity 25.2%; Pred. No. 5 Matches 34; Conservative 15; Mismatch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION: 530
PRIOR APPLICATION DATA:
NUMBER: US 810,560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: U5/08/449,700
FILING DATE: 21-FEB-1992
                                                           FILING DATE: 18-QCT-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: US 827,052 FILING DATE: 28-JAN-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION: OSTEOGENIC DEVICES NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                              FILING DATE: 04-DEC-1990 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 20-DEC-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   245 HGPQNKQPFMVAFFK 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            186 FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   126 PRYHHREERFDLSKIPEGEAVTAAEFRIYKDYIRERFDNETFRISVYQVLQEHLGRESDL 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     107 WKPYKKRETPDCFWK 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 6 FILING DATE: 22-FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 20-DEC
                                        APPLICATION NUMBER:
                                                                                               APPLICATION NUMBER:
                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                              APPLICATION NUMBER: US 621,849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22 PILDSREISFQLSAPHEDARLTPEELE------RASLLQILPEMLG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -----AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPNILLSHLLARI ·106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5863758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MASSACHUSETTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application US/08449700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           53 STATE STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PANG, ROY H.L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      KUBERASAMPATH, T
RUEGER, DAVID C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OZKAYNAK, ENGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPPERMANN, HERMANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TESTA,
                                                                            18-QCT-1990
                                                                                                                                                                                           04-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                      21-NOV-1990
                          18-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HURWITZ & THIBEAULT
                                                                                                 US 600,024
                                                                                                                                                                                                                                                                      US 621,988
                                                                                                                                                                                                                                                                                                                          us 660,162
                                                                                                                                                     US 616,374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         THANGAVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ن</u>
                                                                                                                                                                                                     PALENT NO. 5930...

PALENT NO. 5930...

GENERAL INFORMATION:

APPLICANT: OPPERMANN, HERMANN

APPLICANT: OZKAYNAK, ENGIN

APPLICANT: KUBERASAMPATH, THANGAVEL

RHEGER, DAVID C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ωy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                                                                                                                                                                              RESULT 14
US-08-449-699A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; MOLECULE TYPE: protein US-08-449-700-15
                                                                                                                                                                                                                                                                                                                            Sequence 15, Application US/08449699A Patent No. 5958441
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO:
COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 15-AUG-
PRIOR APPLICATION DATA:
                                                                                                                                                                        TITLE OF INVENTION: ANTIBODIES TO OSTEOGENIC PROTEINS NUMBER OF SEQUENCES: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELECOMMUNICATION INFORMATION: TELEPHONE: 617/248-7000
                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           107 WKPYKKRETPDCFWK 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        126 PRYHHREFREDLSKIPEGEAVTAAEFRIYKDYIREREDNETERISVYQVLQEHLGRESDL 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                         245 HGPONKOPEMVAFEK 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                186 FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: 617/248-7100
                                        COUNTRY: U.S.A. ZIP: 02110
                                                                                                                 STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 315,342 FILING DATE: 23-FEB-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 4
FTLING DATE: 17-OCT-1989
                                                                                                                 ADDRESSEE: TESTA, HURWITZ & THIBEAULT STREET: 125 HIGH STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22 PLLDSREISFQLSAPHEDARLTPEELE-------RASLLQILPEMLG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Match 10.5%; Score 69; DB 2; Length 408; Local Similarity 25.2%; pred. No. 5.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 5 FILING DATE: 07-SEP-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 27,829
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPNILLSHLLARI 106
                                                                                               BOSTON
                                                                          MASSACHUSETTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PITCHER, EDMUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             08-APR-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       22-FEB-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-AUG-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 179,460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US 232,630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US 422,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US 483,913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 569,920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US 579,865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
```

ū

APPLICATION NUMBER:

US 616,374

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                US-08-447-570-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOLECULE TYPE: protein JS-08-147-023-15
                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                Sequence 15, Application US/08447570 Patent No. 5714589
                                                                                                               GENERAL 1NFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NFORMATION FOR SEQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              REGISTRATION NUMBER: 27,829
REFERENCE/DOCKET NUMBER: CRP-001CP6
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE CHARACTER1STICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 08-APR-1988 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 179,460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
 NUMBER OF
                                APPLICANT:
                                                APPLICANT:
                                                                APPLICANT:
                                                                             APPLICANT: OPPERMANN, HERMANN APPLICANT: OZKAYNAK, ENGÎN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                              107 WKPYKKRETPDCFWK 121
                                                                                                                                                                                                                                                                                                                                                           126 PRYHHREFRFDLSKIPEGEAVTAAEFR1YKDY1RERFDNETFRISVYQVLQEHLGRESDL 185
                                                                                                                                                                                                                              245 HGPQNKQPFMVAFFK 259
                                                                                                                                                                                                                                                                                           .86 FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 244
                                                                                                                                                                                                                                                                                                                                  62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: PITCHER, EDMUND REGISTRATION NUMBER: 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 4
FILING DATE: 17-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                              22 PLLDSRE1SFQLSAPHEDARLTPEELE-------RASLLQILPEMLG----- 61
                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FIL1NG DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPL1CATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                           -----AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPN1LLSHLLAR1 106
1NVENTION:
SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           408 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               617/248-7100
                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                              PANG, ROY H.L.
                                             RUEGER,
                                                                KUBERASAMPATH, THANGAVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                617/248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  18-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               23-FEB-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                20-AUG-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  07-SEP-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 22-FEB-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    18-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                              10.5%;
                                             DAV1D C.
               OSTEOGENIC DEVICES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 315,342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 483,913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 599,543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             us 232,630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 579,865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US 422,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 us 569,920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 600,024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15:
                                                                                                                                                                                                                                                                                                                                                                                                                             15; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 69;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                              50; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 408;
                                                                                                                                                                                                                                                                                                                                                                                                                              36;
                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                             5
```

```
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Rel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                             TELECOMMUNICATION 1NFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 17-OCT-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 04-DEC-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 660,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
                                                                                                 SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PR1OR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 5.

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 60 FILING DATE: 18-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: US 6: FILING DATE: 21-NOV-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 8
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US 1 FILING DATE: 08-APR-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 3: FILING DATE: 23-FEB-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 57 FILING DATE: 07-SEP-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F1LING DATE:
                                                                                                                                                                                              TELEPHONE:
                                                                                                                                                                                                                                                                   REGISTRATION NUMBER: 27,829
REFERENCE/DOCKET NUMBER: CR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FIL1NG DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPL1CATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F1L1NG DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPL1CATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE:
POPOLOGY:
                                                          ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02109
                                                                                                                                                                                                                                                                                                                                  PITCHER,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MASSACHUSETTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                53 STATE STREET
                                                          408 amino acids
                                                                                                                                                                  617/248-7100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1BM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TESTA, HURWITZ & THIBEAULT
                                                                                                                                                                                                  617/248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   04-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       04-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17-OCT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  22-FEB-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-AUG-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         18-OCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     22-FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              20-DEC-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-FEB-1992
                                                                                                                                                                                                                                                                                                                                     EDMUND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 599,543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                   US 179,460
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 232,630
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US 315,342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 422,613
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 579,865
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US 600,024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 616,374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 621,849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       US 621,988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 810,560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US 483,913
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 569,920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US 827,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US/08/447,570
                                                                                                                                                                                                                                                                   CRP-001CP6
```

Patent No. 5266683

'n

```
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 422,613
APPLICATION NUMBER: 17-0CT-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: TESTA, HURWITZ & THIBEAULT
STREET: 53 STATE STREET
                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
PRIOR APPLICATION DATA:
US 569,920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
FILING DATE: 08-APR-1988 ATTORNEY/AGENT INFORMATION:
                                                                                                APPLICATION NUMBER: FILING DATE: 23-FEB-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                FILING DATE: 20-AUG-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES: 33
                                                                                                                                                PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 1
FILING DATE: 04-DEC-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 28-JAN-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                              APPLICATION NUMBER: 1
F1LING DATE: 15-AUG-
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 22-FE
                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 579,865 FILING DATE: 07-SEP-1990
                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 18-QCT
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 61 FILING DATE: 18-OCT-1990
                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 8 FILING DATE: 20-DEC-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: UFILING DATE: 19920221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 827,052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CLASSIF1CATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MASSACHUSETTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RUEGER, L.
ROY H.L.
OSTEC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KUBERASAMPATH, THANGAVEL RUEGER, DAVID C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OPPERMANN, HERMA
OZKAYNAK, ENGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          U.S.A.
                                                                  15-AUG-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER: US 621,988
04-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           22-FEB-1991
                                                                                                                  23-FEB-1989
                                                                                                                                                                                                                 22-FEB-1990
                                                                                                                                                                                                                                                                 20-AUG-1990
                                                                                                                                                                                                                                                                                                                                                              18-QCT-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             04-DEC-1990
                                                                                                                               US 315,342
                                                                                                                                                                                                                                                                                                                                                                               US 599,543
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US 810,560
                                  US 179,460
                                                                                 US 232,630
                                                                                                                                                                                                                                US 483,913
                                                                                                                                                                                                                                                                                                                                                                                                                               US 600,024
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 616,374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US 660,162
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US 621,849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HERMANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US/07/841,646
```

```
RESULT 11
US-08-147-023-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δλ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TOPOLOGY: 1;; MOLECULE TYPE: US-07-841-646-15
                                                                                                                                                                        COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/147,023
FILING DATE: 21-FEB-1992
CLASSIFICATION: 530
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 810,560
FILING DATE: 20-DEC-1991
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 827,052
FILING DATE: 28-JAN-1992
FILING DATE: 28-JAN-1992
FILING DATE: 28-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -08-14,
Sequence 15, Approx
Sequence 15, Approx
No. 5468845
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 10.5
Best Local Similarity 25.2
Matches 34; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 617/248-7100 INFORMATION FOR SEQ ID NO:
                PRIOR APPLICATION DATA:
APPLICATION NUMBER: |
FILING DATE: 04-DEC-
                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                       FILING DATE: 22-FEB-1991 PRIOR APPLICATION DATA:
                                                                                                                                          PRIOR APPLICATION DATA: APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: OSTEOGENIC DEVICES NUMBER OF SEQUENCES: 33
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: CR
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/248-7000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
PRIOR APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPL1CANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     126 PRYHHREFRFDLSKIPEGEAVTAAEFRIYKDYIRERFDNETFRISVYQVLQEHLGRESDL 185
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            245 HGPQNKQPFMVAFFK 259
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             107 WKPYKKRETPDCFWK 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                186 FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 244
                                                                    APPLICATION NUMBER: FILING DATE: 04-DE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: 61//2.
TELEPHONE: 61//248-7100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22 PLLDSREISFQLSAPHEDARLTPEELE------RASLLQILPEMLG-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -----AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPNILLSHLLAR1 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                          02109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BOSTON
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MASSACHUSETTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08147023
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E: TESTA, HURWITZ & THIBEAULT
53 STATE STREET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             408 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         U.S.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        KUBERASAMPATH, TRUEGER, DAVID C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OZKAYNAK, ENGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPPERMANN, HERMANN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein
                                                                    04-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
              JMBER: US 621,849
04-DEC-1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ROY H.L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10.5%;
                                                                                                                                          US 660,162
                                                                                     US 621,988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          THANGAVEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CRP-001CP6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 69; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 408
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19
```

NUMBER OF SEQUENCES:

```
밁
                                                                                                                                                                                                                                                                                                                                                                     JS-09-477-071-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                   Sequence 5, Application US/09477071 Patent No. 6348585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                SEQ ID NO 5
LENGTH: 11
                                                                                                CURRENT APPLICATION.NUMBER: US/09/477,071
CURRENT FILING DATE: 2000-01-03
CARLIER APPLICATION NUMBER: 09/027,381
EARLIER FILING DATE: 1998-02-20
EARLIER APPLICATION NUMBER: 60/072,383
EARLIER FILING DATE: 1998-01-09
EARLIER APPLICATION NUMBER: 60/073,616
EARLIER APPLICATION NUMBER: 60/073,616
                                                                                                                                                                                                                            APPLICANT: MCNULTY, DEAN
APPLICANT: ELLIS, CATHERINE
TITLE OF INVENTION: HUMAN UROTENSIN II
FILE REFERENCE: GP-70366-D2
                                                                                                                                                                                                                                                                                                  APPLICANT: CULP, JEFFREY
                                                    SOFTWARE:
                                                                      NUMBER
                                                                                    EARLIER FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
APPLICATION NUMBER: US,
FILING DATE: 15-JAN-199
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: GP-50005-2
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
ADDRESSEE: Ratner & Prestia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           114 ETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STREET: F.C.
CTTY: Valley Forge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: 610 - 1000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 09-FE APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY: UZIP: 19482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Prestia, Paul F
REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 08/7:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM: DOS SOFTWARE: FastSEQ for Windows Version 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                           1 ETPDCFWKYCV 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENGTH:
                                                                    OF SEQ
                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                  FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            846169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         P.O. Box 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1inear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           15-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10-APR-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09-FEB-199B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.3%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    09/058,725
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/074,075
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        08/789,354
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/09/232,857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 74; DB 4;
Pred. No. 0.01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               0
```

```
γΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; ORGANISM: HOMO SAPIENS US-09-477-071-5
RESULT 10
US-07-841-646-15
; Sequence 15, Ap
                                                                                 DЬ
                                                                                                                                              DЬ
                                                                                                                                                                          δõ
                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-07-764-731B-10
                                                                                                                                                                                                                                                                                                                                       US-07-764-731B-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 10, App. 536687
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 11.3
Best Local Similarity 100
Matches 11; Conservative
                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEFAX: 617-876-5851 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Legal Affairs, Genetics Institute, Inc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Wozney, John M.
TITLE OF INVENTION: Methods for Producing BMP-7 Proteins
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              114 ETPDCFWKYCV 124
                                                                               237 HGPQNKQPFMVAFFK 251
                                                                                                            107 WKPYKKRETPDCFWK 121
                                                                                                                                             178 FLLDSRTLWASEEGWLVFDITATSNHWVVNPRHNLGLQLSVETLDGQSINPKLAGLIGR- 236
                                                                                                                                                                                                          118 PRYHHREFRFDLSKIPEGEAVTAAEFRIYKDYIRERFDNETFRISVYQVLQEHLGRESDL 177
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: Kapinos, Ellen J. REGISTRATION NUMBER: 32,245 REFERENCE/DOCKET NUMBER: GI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: USE FILING DATE: 19910924 CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STREET:
                                                                                                                                                                                                                                           22 PLLDSREISFQLSAPHEDARLTPEELE-----
                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 ETPDCFWKYCV 11
                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02140
                                                                                                                                                                                                                                                                                                                                                                                 AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ΜA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Application US/07764731B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    87 CambridgePark Drive
                                                                                                                                                                                                                                                                                                                                                                                                                                                617-876-5851
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rosen, Vicki A.
Wang, Elizabeth A.
                                                                                                                                                                           -----AERGDILRKADSSTN--IFNPRGNL---RKFQDFSGQDPNILLSHLLARI 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IBM PC compatible SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  617-876-1170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Floppy disk
                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vicki A.
                                                                                                                                                                                                                                                                                      10.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11.3%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US/07/764,731B
                                                                                                                                                                                                                                                                         15; Mismatches
                                                                                                                                                                                                                                                                                      Score 69; 1
Pred. No. 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 74;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GI5159B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 4;
0.01;
                                                                                                                                                                                                                                           -----RASLLQILPEMLG-----
                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                         50; Indels 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 11;
                                                                                                                                                                                                                                                                                                        Length 400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                           Ś
```

Application US/07841646

```
RESULT 6
US-09-058-725B-5
; Sequence 5, Application US/09058725B
; Patent No. 6133420
                                                                                           Дb
                                                                                                                       ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            οy
                                                                                                                                                                                                                 US-09-027-381-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-027-381-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 5, Application Patent No. 6075137 GENERAL INFORMATION:
                                                                                                                                                                                 Query Match
                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity Matches 96; Conserv
                                                                                                                                                                                                                                                                                                                    TELEX: 846169
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/027,381 FILING DATE: 20-FEB-1998 CLASSIFICATION:
                                                                                                                                                                                                                              MQLECULE TYPE:
                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: 610-407-0700
                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 04-FEB-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR, APPLICATION DATA:
APPLICATION NUMBER: 60/0
FILING DATE: 09-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: CULP, JEFFREY APPLICANT: MCNULTY, DEAN APPLICANT: ELLIS, CATHERJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: ELLIS, CATHERINE TITLE OF INVENTION: HUMAN UP
                                                                                                                       II4 ETPDCFWKYCV I24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 610-407-0701
                                                                                                                                                                                                                                         STRANDEDNESS:
TOPOLOGY: 11
                                                                                                                                                                                                                                                                        TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                        NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: GP-70366-1P FILING DATE: 04-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    54 TNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFWKYCV 103
                                                                                          1 ETPDCFWKYCV 1I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     75 TNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             I5 LNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSS 74 :||:||:||
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 MNPTLS-----ICFYSVAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSS 53
                                                                                                                                                     I1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , Application US/0902738I 6075I37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     19482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VALLEY FORGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P.O.
                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RATNER & PRESTIA
O. BOX 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Diskette
                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                        single
                                                                                                                                              II.3%; 5--
100.0%; Pr
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HUMAN UROTENSIN II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         87.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/072,383
                                                                                                                                                                 Score 74;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                             GP-70366
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 2.2e-51;
                                                                                                                                                  Mlsmatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mlsmatches
                                                                                                                                                                 DB 3;
0.01;
                                                                                                                                                  0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4.
                                                                                                                                                                            Length lI;
                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                 Gaps
                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <u>..</u>
```

```
Db
                                                                                                                                                                                                                                                                                                                                                                     ő
                                                                                                                                                                                                                                                                               RESULT 7
US-09-232-857-5
                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
                                                                                                                                                                                                                                                                Sequence 5,
                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                 Patent No. 6159700
                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                    APPLICANT:
    TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: GF
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US/09/058,725B
FILING DATE: APRIL 10, 1998
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/789,354
                                    APPLICANT:
                                                    APPLICANT
                                                              APPLICANT:
                                                                               APPLICANT
                                                                                               APPLICANT:
                                                                                                              APPLICANT:
                                                                                                                               APPLICANT:
                                                                                                                                           APPLICANT:
                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 27-JAN-1997
ATTORNEY/AGENT INFORMATION:
NAME: Han, William T.
REGISTRATION NUMBER: 34,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM Compatible
OPERATING SYSTEM: DQS
SOFTWARE: FastSEQ for windows Version
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline
STREET: 709 Swedeland
CITY: King of Prussia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: A Method of Finding Angonist TITLE OF INVENTION: and Antagonist To Human and Rat GPR
                                                                                                                                                                                                                                                                                                                                                                    114 ETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRANDEDNESS: Si
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity les I1; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEFAX: 6I0-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE:
                                                                                                                                                                                                                                                                                                                                        I ETPDCFWKYCV 1I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                                                                                                                                                                                                                                              Application US/09232857
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PΑ
                                                                           AMES, ROBERT S.
FOLEY, JAMES J.
SARAU, HENRY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                 BERGSMA,
                                                 CHAMBERS, JON K. SHABON, USMAN
                                                                                                                          AL-BARAZANJI, KAMAL
                                                                                                                                          GQUT, BERNARD
                                                                                                                                                        KHANDOUDI, NASSIRAH
                                                                                                                                                                       ROMANIC, ANNE
                                                                                                                                                                                      AIYAR, NAMBI
                                                                                                                                                                                                    WILLETTE,
                                                                                                                                                                                                                  DOUGLAS, STEPHEN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chamber, Jon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sarau, Henry
Foley, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ames, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single
                                                                                                                                                                                                                                                                                                                                                                                                                  I1.3%;
100.0%;
A METHOD OF FINDING AGONIST AND ANTAGONIST TO HUMAN AND RAT GPRI4
                                   DERK
                                                                                                                                                                                                    ROBERT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34,344
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Beecham Corporation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ភ
                                                                                                                                                                                                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 74; DB 4; 
; Pred. No. 0.01;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GP50005-1
                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                                             Length 11,
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                 0,
                                                                                                                                                                                                                                                                                                                                                                                               Gaps
```

```
US-09-027-381-4-
                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; SEQ ID NO 2
; LENGTH: 139
; TYPE: PRT
; ORGANISM: HOMO SAPIENS
US-09-477-071-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dр
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 2
US-09-477-071-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/09477071 Patent No. 6348585
                                                                                                                                                                                                        Sequence-4,-Application US/09027381 Patent No. £6075137-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 106;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EARLIER APPLICATION NUMBER: 09/027,381 EARLIER FILING DATE: 1998-02-20 EARLIER APPLICATION NUMBER: 60/072,383 EARLIER FILING DATE: 1998-01-09 EARLIER APPLICATION NUMBER: 60/073,616
                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EARLIER FILING DATE: 1998-02-04 NUMBER OF SEQ ID NOS: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CURRENT FILING DATE: 2000-01-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT APPLICATION NUMBER: US/09/477,071
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: GP-70366-D2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: ELLIS, CATHERINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: HUMAN UROTENSIN II
                                                                                                         APPLICANT: MCNULTY, DEAN APPLICANT: ELLIS, CATHERINE TITLE OF INVENTION: HUMAN OF
                                                                     TITLE OF INVENTION: HUMAN UROTENSIN II NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                      APPLICANT: CULP, JEFFREY
                                                                                                                                                                                                                                                                                                                     135 WKYCV 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          135 WKYCV 139
                                                                                                                                                                                                                                                                                                                                                         120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60 LGAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCF 119
     CITY:
STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18
                                                                                                                                                                                                                                                                                                                                                                                                              60 LGAERGDILKKADSSTNIFNPRCNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCF 119
                                       STREET:
                                                        ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18 HKSTSLC---FGHFNSYPSLPLIHDLLLEISFQLSAPHEDARLTPEELERASLLQILPEM 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 YKLASCCLLFIGFLNPLLSLPLLDS--REISFQLSAPHEDARLTPEELERASLLQILPEM 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 YKLASCCLLFIGFLNPLLSLPLLDS--REISFQLSAPHEDARLTPEELERASLLQILPEM 59
                                                                                                                                                                                                                                                                                                                                                                                             LGAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCF 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LGAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCF 134
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HKSTSLC---FGHFNSYPSLPLIHDLLLEISFQLSAPHEDARLTPEELERASLLQILPEM 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                106; Conservative
     VALLEY FORGE
PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CULP, JEFFREY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MCNULTY,
                                         P.0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                         RATNER & PRESTIA O. BOX 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              84.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 533.5; DB 4
Pred. No. 2.1e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ن</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ν
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-027-381-4
                                       US-09-477-071-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-477-071-4
                                                                                                               SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09477071 Patent No. 6348585
 Query Match
                                                                                                                                                                                 EARLIER APPLICATION NUMBER: 09/027,381 EARLIER FILING DATE: 1998-02-20 EARLIER APPLICATION NUMBER: 60/072,383 EARLIER FILING DATE: 1998-01-09 EARLIER APPLICATION NUMBER: 60/073,616
                                                                                                                                                                                                                                                                                                                                                  APPLICANT: CULP, JEFFREY
APPLICANT: MCNULTY, DEAN
APPLICANT: ELLIS, CATHERINE
                                                                                                                              SOFTWARE: FastSEQ
                                                                                                                                                 NUMBER OF SEQ ID NOS:
                                                                                                                                                                    EARLIER FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/477,071 CURRENT FILING DATE: 2000-01-03
                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: HUMAN UROTENSIN II FILE REFERENCE: GP-70366-D2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO:
                                                                           TYPE: PRT
                                                      ORGANISM: HOMO SAPIENS
                                                                                          LENGTH: 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: 1i
MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE CHARACTERISTICS: LENGTH: 103 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700 -
TELEFAX: 610-407-0701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY: US
ZIP: 19482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15 LNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSS 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: GP-70
FILING DATE: 04-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/0 FILING DATE: 09-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/09/027,381 FILING DATE: 20-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54 TNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFWKYCV 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              75 TNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 MNPILS-----ICFYSVAPHEDARLTPEELERASLLQILPEMLGAERGDILRKADSS 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    846169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       103 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    IBM Compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Diskette
                                                                                                                                for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47,6:::08;;
87 . 38;
 76.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GP-70366-1P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/072,383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GP-70366
 Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 498; DB 3; Pred. No. 2.2e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches .
 DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 103
Length 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
```

۲,

Sequence 17, Appl
Sequence 2, Appli
Sequence 4, Appli
Sequence 2, Appli
Sequence 2, Appli
Sequence 6, Appli
Sequence 6, Appli
Sequence 2, Appli
Sequence 17, Appli

Sequence Sequence Sequence Sequence Sequence

```
Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Issued_Patents_AA:*
1: /cgn2_6/ptodata/2,
2: /cgn2_6/ptodata/2,
3: /cgn2_6/ptodata/2,
4: /cgn2_6/ptodata/2,
5: /cgn2_6/ptodata/2,
6: /cgn2_6/ptodata/2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-09-831-907A-1
655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             March 10, 2003, 17:37:08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               262574 seqs, 29422922 residues
                    111.3
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
110.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MYKLASCCLLFIGFLNPLLS.....RIWKPYKKRETPDCFWKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /cgn2_6/ptodata/2/1aa/5A_COMB.pep:*
/cgn2_6/ptodata/2/1aa/5B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6A_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/6B_COMB.pep:*
/cgn2_6/ptodata/2/1aa/PCTUS_COMB.pep:*
/cgn2_6/ptodata/2/1aa/backfiles1.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000000000
                    DB
                                                                                                                                                                                                                 US-09-232-857-5

US-09-477-071-5

US-07-764-731B-10

US-07-841-646-15

US-08-447-570-15

US-08-449-700-15

US-08-449-700-15

US-08-449-699A-15

US-07-841-646-2

US-07-939-756-4

US-07-539-756-4

US-08-147-023-2
                                                         US-08-206-864-2

US-08-278-729A-17

US-08-480-528A-4

US-08-479-666-4

US-08-155-343A-17

US-08-66-672-17

US-08-643-563A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-027-381-2

US-09-477-071-2

US-09-027-381-4

US-09-477-071-4

US-09-477-071-5

US-09-027-381-5

US-09-058-725B-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Search time 11.3946 Seconds (without alignments) 320.191 Million cell updates/sec
                                                Sequence 2, Appli
Sequence 4, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 5, Appli
Sequence 15, Appli
Sequence 2, Appli
Sequence 17, Appli
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Description
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 1 (5-09-027-381-2 (5-04-027-381-2 ), Patent No. (6075137), Patent No. (6075137)
                                                                                ; MOLECULE TYPE: protein US-09-027-381-2
Best Local Similarity
                                  Query Match
                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/072,383
FILING DATE: 09-7AN-1998
APPLICATION NUMBER: GP-70366-1P
FILING DATE: 04-FEB-1998
ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: GP-70366
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                       SEQUENCE CHARACTERISTICS: LENGTH: 139 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/027,381
FILING DATE: 20-FEB-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: CULP, JEFFREY
APPLICANT: MCNULTY, DEAN
APPLICANT: ELLIS, CATHERINE
TITLE OF INVENTION: HUMAN UROTENSIN
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM: MEDIUM TYPE: Diskett
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                            TELEFAX: 610
TELEFAX: 846169
                                                                                                                                            TYPE: amino acid
STRANDEDNESS: sir
                                                                                                                            TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CITY: VALLEY FORGE STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19482
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P.O. BOX 980
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                 610-407-0701
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RATNER & PRESTIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Diskette
                                                                                                                                              single
           81.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-08-462-623-17
US-08-451-953A-17
US-08-445-346A-17
US-08-445-468A-17
US-08-481-337A-10
US-08-481-337A-10
US-08-481-337A-10
US-08-481-37A-17
US-08-696-268B-4
US-08-696-268B-17
US-08-912-088-17
US-08-488-811-2
US-08-488-811-2
US-08-488-419-2
US-08-489-467-27
US-08-489-419-2
US-08-489-453-17
US-08-489-553A-17
                                                                                                                                                                                                                                                                                                                                                      GP-70366
         Score 533.5; DB 3
Pred. No. 2.1e-55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ALIGNMENTS
```

Result

ö

533.5 Score

DB 3;

Minimum Maximum

Scoring table:

Perfect score:

3

protein -

Database :

PRIOR

APPLICATION

NUMBER:

60/088202

1998-06-05 998-06-05

60/088212

NUMBER: 60/088167

1998-06-05

1998-06-04

60/088326

1998-06-04 1998-06-04

60/088033 60/088030

FILING DATE: FILING DATE: APPLICATION APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER:

APPLICATION NUMBER: 60/088217
FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088655

1998-06-09

1998-06-10

FILING DATE: FILING DATE: 1998-0 APPLICATION NUMBER:

FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088810

1998-06-10

60/088858 60/088826 60/088824

1998-06-10

APPLICATION NUMBER:

FILING DATE:

1998-06-10 1998-06-10

APPLICATION NUMBER: 60/088742

APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE:

60/088738 60/088734

DATE:

PRIOR

APPLICATION

NUMBER:

DATE:

NUMBER: 60/088029: 1998-06-04

```
Qy
Qy
                           В
                                                                               В
                                                                                                       QΥ
                                                                                                                                   Ouery Match
Best Local S
Matches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
119 WKYCI
                                                                                                                                              Local Similarity
                           61
                                                  61
                                                                                                                                                                                                                                                                                                                                     R FILING DATE: 1998-07-
R APPLICATION NUMBER: 6
R F1LING DATE: 1998-07-
R APPLICATION NUMBER: 6
                                                                                                           ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1907

APPLICATION NUMBER: 60/0

Paramanate: 1998-06-23
                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-07 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090676 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                    FILING DATE: APPLICATION N
                                                                                                                                                                                                                                                                                  FILING DATE: APPLICATION |
                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01 APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                       FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                            FILING DATE:
APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/090695 FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090535 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1998-00
                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                       GTEAEGSLGQADPSAETPTPRGSLRK--ALTGODSNTVLSRLLARTRKQRKQHGTAPECF 118
                        GAERGDILRKADSSTNIFNPRGNLRKFQDFSGODPNILLSHLLARIWKPYKKRET-PDCF
123
                                                                                                                                                                                        DATE:
                                                                                                                                   Conservative
                                                                                                                                                                                      NUMBER: 60/092182: 1998-07-09
                                                                                                                                                                                                                              NUMBER: 60/091982
                                                                                                                                                                                                                                                                                  NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                            NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                1998-07-02
                                                                                                                                                                                                                                                                                                                           1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-23
                                                                                                                                                                                                                                          1998-07-07
                                                                                                                                                                                                                                                                                                                                                     1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               998-06-24
                                                                                                                                                                                                               998-07-07
                                                                                                                                              44.2%;
                                                                                                                                                                                                                                                        60/091978
                                                                                                                                                                                                                                                                                                                                      60/091519
                                                                                                                                                                                                                                                                                                                                                                60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090349
                                                                                                                                   16;
                                                                                                                                 Pred. No. 1.4e-22;
5; Mismatches 44
                                                                                                                                                           Score 279.5;
                                                                                                                                                            DB
                                                                                                                                 44;
                                                                                                                                                           9
                                                                                                                                  Inde1s
                                                                                                                                                           Length
                                                                                                                                                            124;
                                                                                                                                 Ψ
                                                                                                                               Gaps
                                                                              60
                                                                                                       60
                                                                                                                                 2
```

PRIOR PRIOR

APPLICATION

NUMBER:

806680/09 60/089907

1998-06-18 1998-06-18

PRIOR

APPLICATION FILING DATE:

NUMBER:

PRIOR

PRIOR

APPLICATION NUMBER: FILING DATE:

FILING DATE: APPLICATION

1998-06-19

PRIOR

PRIOR

NUMBER: NUMBER:

60/089952 60/089948 60/089947

1998-06-19

1998-06-19

FILING DATE: APPLICATION APPLICATION FILING DATE:

NUMBER:

60/090246

R FILING DATE:
R APPLICATION N
R FILING DATE:
R APPLICATION N

NUMBER:

60

/090252

1998-06-22

1998-06-22

PRIOR PRIOR

FILING DATE: APPLICATION

NUMBER:

NUMBER: 60/089801 1998-06-18 1998-06-17 PRIOR

APPLICATION NUMBER: FILING DATE: APPLICATION FILING APPLICATION FILING DATE: FILING DATE: APPLICATION | APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION APPLICATION F1LING DATE: APPLICATION APPLICATION NUMBER: FILING DATE: F1L1NG DATE: APPLICATION APPLICATION NUMBER: FILING DATE: FILING DATE: 1998-0 APPLICATION NUMBER:

RIOR

DATE:

NUMBER:

1998-06-17 1998-06-17 1998-06-17 1998-06-17

60/089653 60/089600 60/089599

NUMBER:

NUMBER:

60/089598

LING DATE:

NUMBER: 60/089512

1998-06-16

1998-06-16 1998-06-12

60/089440

NUMBER:

60/089105

1998-06-11

60/088876

1998-06-11 1998-06-11

60/088861

NUMBER:

1998-06-16

NUMBER:

1998-06-17

60/089538 60/089532 60/089514

```
RESULT 10
US-09-989-734-266
Sequence 266, Ap
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 266, Appropriate Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
                                                                                                                                              PRTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/989,734
CURRENT FILING DATE: 2001-11-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Ashkenazi,Avi J.
APPLICANT: Baker,Kevin P.
                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/062250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILE REFERENCE: P2730P1C64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         \PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60 FILING DATE: 1997-11-1
                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13
                                                                    APPLICATION NUMBER: 60/088025
                                                                                         FILING DATE: 1998-06-04
                                                                                                                                              APPLICATION NUMBER: 60/087827
                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                  APPLICATION NUMBER: 60/087759
                                                                                                                                                                                                       APPLICATION NUMBER: 60/087609 FILING DATE: 1998-06-02
                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-09
                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/066770
                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | | | | :
WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watanabe, Colin K.
Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Paoni, Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L.
Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09989734 to. US20030003531A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Margaret Ann
art, Timothy A.
                                NUMBER: 60/088026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1997-10-17
                                                                                                                                                                                                                                           1998-06-02
                                                                                                                                                                                                                                                                                                                                                     1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                               1998-02-25
                                                     1998-06-04
                                                                                                                             1998-06-03
                                                                                                                                                                   1998-06-02
                                                                                                                                                                                                   1998-06-02
                                                                                                                                                                                                                                                                               1998-05-28
                                                                                                                                                                                                                                                          60/087607
                                                                                                                                                                                                                                                                                              60/087106
                                                                                                                                                                                                                                                                                                                                                                                                            60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/065186
                                                                                                          60/088021
60/088028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
             OR APPLICATION NUMBER: 60/089948
DR FILING DATE: 1998-06-19
RR APPLICATION NUMBER: 60/089952
DR FILING DATE: 1998-06-19
DR APPLICATION NUMBER: 60/090246
DR FILING DATE: 1998-06-22
DR APPLICATION NUMBER: 60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R FILING DATE: 1998-06-04
R APPLICATION NUMBER: 60/0
R FILING DATE: 1998-06-04
R APPLICATION NUMBER: 60/0
R FILING DATE: 1998-06-04
                                                                                                                                                                            FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/089908
FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/088861 FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 1998-01 APPLICATION NUMBER:
                                                                                                                                            APPLICATION NUMBER: 60/089947 FILING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/089801 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/088033
                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/089653
                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/089600
                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/089599
                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                            LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LING DATE:
```

NUMBER: 60/1: 1998-06-10

60/088742

1998-06-10

60/088824 60/088810

1998-06-10

1998-06-1

NUMBER: 60/088738

1998-06-10

60/088734 60/088655

1998-06-05 1998-06-05

60/088217

1998-06-09

1998-06-10

NUMBER: 60/088202

1998-06-05

60/088167

1998-06-04 1998-06-04

60/088029 /088030

: 1998-06-22 NUMBER: 60/090252 : 1998-06-22

1998-06-17

60/089907

1998-06-

1998-06-

1998-06-17

1998-06-

60/089598

1998-06-16

1998-06-17

1998-06-16

1998-06-16

60/089512

1998-06-11

60/088876

1-90-8661

NUMBER: 6: 1998-06-

NUMBER:

60/090349 60/090254

1998-06-2

PRIOR

APPLICATION NUMBER:

1998-06-24 1998-06-24

PRIOR

FILING DATE: APPLICATION

NUMBER: NUMBER:

.998-06-24

PRIOR

APPLICATION FILING DATE:

FILING DATE: APPLICATION | FILING DATE:

NUMBER: 60/090431

1998-06-2 1998-06-24 APPLICATION

NUMBER:

60/090429

,998-06-23

60/090355

PRIOR

1998-06-24 1998-06-24

PRIOR

APPLICATION NUMBER: 6 FILING DATE: 1998-06-

60/090557 60/090542 60/090540 60/090535 60/090472 60/090445 60/090444 60/090435

APPLICATION NUMBER: 60/090676

FILING DATE:

1998-06-25 1998-06-25

1998-06-

-90-8661

FILING DATE: 1998-06-24

APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE:

LING DATE:

1998-06-24

```
61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF
                  GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                  MDRVPFCCLLEVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                        MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                             Gaps
                                                          60
                                                                                                             'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT I1
US-09-997-653-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
TITLE OF INVENTION:
FILE REFERENCE: P273(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 266, Ap
Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                      PRIOR
                                                                                                             PRIOR
                                                                                                                                                                 PRIOR
                                                                                                                                                                                              PRIOR.
                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                         CURRENT APPLICATION NUMBER: US/09/997,653
CURRENT FILING DATE: 2001-11-15
                                                                                                                           PRIOR
                                                                                                                                                      PRIOR
                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119 WKYCI 123
||||:
|120 WKYCV 124
    FILING DATE: 1998-00-04
APPLICATION NUMBER: 60/0
APPLICATION NUMBER: 60/0
                                                                  APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                           APPLICATION NUMBER: 60 FILING DATE: 1998-05-2
FILING DATE:
APPLICATION |
                                                     APPLICATION NUMBER:
                                                                                             FILING DATE:
                                                                                                           APPLICATION NUMBER:
                                                                                                                        FILING DATE:
                                                                                                                                    APPLICATION NUMBER: 60/087609
                                                                                                                                                  APPLICATION NUMBER: 60/
FILING DATE: 1998-06-02
                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1997-11-12
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/049787
FILING DATE: 1997-06-16
                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               INVENTION: Secreted and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Watanabe, Colin K. Williams, P. Mickey Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                zhang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roy, Margaret Ann
Stewart, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Paoni, Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski,Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09997653
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US20030008297A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ION: Acids
P2730P1C38
NUMBER:
                                                                 1998-06-03
                                                                                                                                                                                                         1998-05-07
                                                                                             1998-06-02
                                                                                                                                                                                                                                                            1998-03-20
                                                                                                                                                                                                                                                                                                                     1997-I1-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zemin
                                                                                                                       1998-06-02
                                                                                                                                                                                                                                                                                          1998-02-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Daniel
                                                                                                                                                                                                                                   998-04-28
                                                   60/088021
                                                                                                         60/087759
                         60/088025
                                                                                                                                                                                                                                               60/083322
                                                                               60/087827
                                                                                                                                                                                                                      60/084600
                                                                                                                                                              60/087607
                                                                                                                                                                                         60/087106
                                                                                                                                                                                                                                                                            60/078910
                                                                                                                                                                                                                                                                                                       60/075945
                                                                                                                                                                                                                                                                                                                                                             60/065311
                                                                                                                                                                                                                                                                                                                                                                                        60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                   60/062250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ed and Transmembrane Polypeptides and Nucleic Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Þ
```

PRIOR PRIOR PRIOR

> FILING DATE: APPLICATION NUMBER: FILING DATE: FILING DATE: APPLICATION NUMBER:

60/091360

APPLICATION NUMBER:

APPLICATION NUMBER: 60/091626

FILING DATE:

FILING DATE: FILING DATE: 1998-07 APPLICATION NUMBER:

60/091519

APPLICATION NUMBER: 60/091544

1998-07-02 1998-07-01 1998-06-26 1998-06-26 1998-06-1998-06-

60/091478

PRIOR PRIOR

PRIOR PRIOR

APPLICATION NUMBER:

60/090863

60/090862 60/090696 60/090695 60/090694 60/090690 60/090678

PRIOR

FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE:

20 д Š

61

Matches Best Query Match

Local

l Similarity 62; Conserv

Conservative

16;

44.28;

Score 279.5; Pred. No. 1. Mismatches

1.4e-22; 44;

Length 124; Indels

Ψ

APPLICATION FILING DATE FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER:

NUMBER: 60/092182

1998-07-09

NUMBER: 60/091982 1998-07-07

APPLICATION NUMBER:

1998-07-07 1998-07-02 1998-07-02 1998-07-02 1998-07-01

60/091978

60/091633

밁

```
PRIOR
PRIQR
                                                                                                                                                                                                                                       PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                   PRIOR PRIOR
                                                                                                                          PRIOR PRIOR
                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                             PRIQR
PRIOR
                                                                                                                                                                                                                                                                                                                          PRIQR
PRIOR
                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                      PRIOR
                                                                                                                                                                                  PRIQR
                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                               PRIQR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIQR
                                                                    PRIOR
          R FILING DATE: 1998-06-19
R APPLICATION NUMBER: 60/08
R FILING DATE: 1998-06-19
R APPLICATION NUMBER: 60/08
R FILING DATE: 1998-06-19
R APPLICATION NUMBER: 60/09
R APPLICATION NUMBER: 60/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                    R FILING DATE: 1998-06-11
R APPLICATION NUMBER: 60/01
R FILING DATE: 1998-06-11
R APPLICATION NUMBER: 60/01
R FILING DATE: 1998-06-12
R APPLICATION NUMBER: 60/01
                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089538
FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/088202 FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/088734
FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/
FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089514 FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-10
                                                                                                             APPLICATION NUMBER:
                                                                                                                           FILING DATE:
                                                                                                                                         APPLICATION NUMBER: 60/089908
                                                                                                                                                      FILING DATE:
                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-16
APPLICATION
                                                                                                                                                                                                   ...mbER: 60/089653
· 1998-06-17
NUMPET
                           NUMBER: 60/090246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-
                                                                                                                                                                                                                                                               NUMBER: 60/089599
1998-06-17
                                                                                                                                                                                                                                                                                         NUMBER: 60/089598
1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -90-866I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER: 60/088824
1998-06-10
                                                                                                                                                                                   1998-06-18
                                                                                                                                                                                                                                          1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-10
                                                                                                                           1998-06-18
                                                                                                                                                         BI-90-866I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 559880709
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/088033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/088030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088028
                                                                                                                                                                      60/089907
                                                                                                                                                                                                60/089801
                                                                                                                                                                                                                                                        60/089600
                                                                                                                                                                                                                                                                                                                                                                     60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088217
                                                                                                           60/089947
                                                      60/089952
                                                                                60/089948
```

```
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                           PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                             PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                  PRIOR
                                                                                                    PRIOR
                                                                                                                                                                               PRIOR
                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                         PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                            R FILING DATE: 1998-06-
R APPLICATION NUMBER: (
R FILING DATE: 1998-06-
R APPLICATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                       R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090695
FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/
FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
                                                               APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090863
                                                                                                                                                                                                                                                          FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                         FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                      FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                          APPLICATION NUMBER:
APPLICATION |
FILING DATE:
                       FILING DATE:
                                                                                                     FILING DATE:
                                                                                                                             FILING DATE:
                                                                                                                                                       FILING DATE:
                                                                                                                                                                     APPLICATION NUMBER: 60/091544
                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                              APPLICATION NUMBER: 60/091478
                                                                                                                  APPLICATION NUMBER: 60/091626
           NUMBER: 60/092182
                                                                                                                                                                                                                                                                                                                                                                                         NUMBER: 60/090678
1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            I998-06-22
1998-07-09
                                                                                                      1998-07-02
                                                                                                                                                                                                           1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                          1998-07-07
                                                                             1998-07-02
                                                                                                                                1998-07-02
                                                                                                                                                                                  1998-07-02
                                                                                                                                                                                                                                    I998-06-26
                                                                                                                                                                                                                                                                                       1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-24
                                                    1998-07-07
                                                                                                                                                         1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090349
                                                                60/091978
                                                                                         60/091633
                                                                                                                                           60/091519
                                                                                                                                                                                                                       60/091360
                                                                                                                                                                                                                                                                          60/090862
                                                                                                                                                                                                                                                                                                                                                                               60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090254
                                       60/091982
```

```
Q
                                  밁
                                                   Š
밁
                                                                      Query Match
Best Local S
Matches 62
13
               6I GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF
                                                                       62; Conserv
                                                                        Conservative
                                                                                 44.2%;
                                                                        16;
                                                                    Score 279.5; DB 9
Pred. No. 1.4e-22;
6; Mismatches. 44
                                                                        44;
                                                                                         9;
                                                                        Indels
                                                                                         Length
                                                                                            124;
                                                                        ω
••
                                                                       Gaps
                                     60
                                                      60
```

2

```
US-09-993-667-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               망
                                                                                                                                                                               PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 266, Application US/09993667 Publication No. US20030022187A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION NUMBER: US/09/993,667
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ITLE OF INVENTIÓN: Secreted and Transmembrane Polypeptides and Nucleic TTLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Ashkenazi, Avi J. APPLICANT: Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                  FILING DATE: 1998-UJ-U,
RAPPLICATION NUMBER: 60/087106
PTTING DATE: 1998-05-28
                                                                                                                      APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                        FILING DATE: 1998-U3-20

RAPPLICATION NUMBER: 60/083322

FILING DATE: 1998-04-28
                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                            RELIGION NUMBER: 60/062250
RAPPLICATION NUMBER: 60/062250
TIME DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119 WKYCI
                            APPLICATION NUMBER:
                                                                    FILING DATE: 1998-06-03
                                                                                 FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120 WKYCV 124
                                                                                                               APPLICATION NUMBER:
                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                           APPLICATION
                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/065311
                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GrimaIdi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Paoni
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   i, Nicholas F.
Margaret Ann
                                                                                                                                                                                                                                                                                          NUMBER: 60/075945: 1998-02-25
                                                                                              1998-06-02
                                                                                                                                                    1998-06-02
               1998-06-04
                                                                                                                                                                                                                                                                                                                     1997-11-
                                                                                                                                                                                                                                                                                                                                                                              1997-11-
                                                                                                                                                                                                                                                                                                                                                1997-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DanieI
60/088026
                           60/088025
                                                    60/088021
                                                                               60/087827
                                                                                                           60/087759
                                                                                                                                      60/087609
                                                                                                                                                                 60/087607
                                                                                                                                                                                                                      60/084600
                                                                                                             APPLICATION NUMBER: 60/C
                     APPLICATION NUMBER:
                                                                                         FILING DATE
                                     APPLICATION NUMBER: FILING DATE: 1998-06
                                                                           APPLICATION
                                                                FILING DATE:
                                                                                                        APPLICATION
                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                             APPLICATION NUMBER: 60/089600
                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-00 (0008734 APPLICATION NUMBER: 60/088734 TTTNG DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60 FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
       LING DATE: 1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/088030 FILING DATE: 1998-06-04
                                                                                                                                                                            ILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                LING DATE:
                                                                                                                                                                                                                                                                                                                                                                           .LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ICATION NUMBER:
                                                                           NUMBER:
                                                                                                        NUMBER:
                                                                                                                                                                                                                                                                                                   NUMBER:
                                                                                                                                                                                                                                                                                                                                                          NUMBER:
                               1998-06-19
                                                                                                                                                                                                    1998-06-17
                                                                                        1998-06-I8
                                                                                                                                                                         1998-06-17
                                                                                                                                                                                                                                                         1998-06-17
                                                                                                                                                                                                                                                                                                                 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                      1998-06-16
                                                                                                                                                                                                                              1998-06-17
                                                             .998-06-
                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-10
                                                                                                                                                                                                                                                                                    998-06-17
                                                                                                                                                                                                                                                                                                                                         1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  998-06-04
```

60/088742 60/088738

60/088217 60/088212

60/088167 60/088326 60/088033

60/088029 60/088028

60/088810

60/089952 60/089948 306680/09 60/089907 60/089801 60/089653 60/089599

60/089538 60/089532

60/089514 60/089512 60/089440 60/089105 60/088876 60/088861 858880/09 60/088826 60/088824

60/089598

60/089947

```
Ş
                                             В
                                                                          Ş
                                                                                                         Query Match
Best Local S
Matches 62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PKIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090252 FILING DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090678 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090694 FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-
                                                                                                                                                                                                                    FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/091982
                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091978
                                                                                                                                                                                                                                                                                 FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-07-
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                     APPLICATION NUMBER: 60/092182 FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                  FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-02
                                                                                                                                                                                                      FILING DATE: 1998-07-07
                                               MYKLASCCULFTGFLNPLLSLPLLDSREISFOLSAPHEDARLTPEELERASLLOILPEML 60
                                                             MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLOLPVLEENALRALEELERTALLQTLRQTV
GTEAEGSLGOADPSAETPTPRGSLRK--ALTGODSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                            . Similarity
62; Conserv
                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-25
                                                                                                                                                                                                                                                                                                   1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                          1998-07-
                                                                                                                            44.28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                          60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090863
                                                                                                                                                                                                                                                                                                                                                                                                            60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090696
                                                                                                                 16;
                                                                                                              Score 279.5; DB 9
Pred. No. 1.4e-22;
6; Mismatches 44
                                                                                                                                               DB 9;
                                                                                                                  44;
                                                                                                                                             Leng th
                                                                                                                  Indels
                                                                                                                                                  124;
                                                                                                                  ω
••
                                                                                                                    Gaps
                                                                                      60
                                                                                                                      2
```

```
망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
US-09-990-438-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 266, Application US/09990438 Publication No. US20030027754AI GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR ETLING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
PRIOR APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT FILING DATE: 2001-11-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Zhang, Ze
TITLE OF INVENTION: S
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-11-12
PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILE REFERENCE: P2730P1C3
                                                                                                                                                                                                                                                    PRIOR FILING DATE: 1998-03-20
PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-02-25
PRIOR APPLICATION NUMBER: 60/
PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/066770
                                                                                                                                  PRIOR
                                                                                                                                                                 PRIOR APPLICATION NUMBER: 60/087607
                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60 PRIOR FILING DATE: 1998-05-
                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAERGDILRKADSSTNIFNPRGNLRKFODFSGODPNILLSHLLARIWKPYKKRET-PDCF 1.19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WKYCI 123
                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                     FILING DATE:
                                                                  FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087827
                                                                                                                                                   FILING DATE: 1998-06-02
                                   FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/
                                                                                                     APPLICATION NUMBER: 60/087759
                                                                                                                   FILING DATE:
                                                                                                                                  APPLICATION NUMBER:
APPLICATION NUMBER: 60/088025
                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ashkenazi, Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker, Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Roy, Margaret Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Daniel
                                                                                                                                                                                                                          1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Secreted and Transmembrane Polypeptides and Nucleic Acids Encoding the Same
                    1998-06-04
                                                                                                                      1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (T)
                                                                                                                                       60/087609
                                                                                                                                                                                                         60/087106
                                                                                                                                                                                                                                                                        60/083322
                                                                                                                                                                                                                                                                                                         60/078910
                                     60/088021
```

```
γ
           В
                                                       Query Match
Best Local s
Matches 62
                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                             PRIOR
PRIOR
                                                                                                                                                                                                                                                                            PR1OR
PRIOR
                                                                                                                                                                    PRIOR
                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                           PRIOR
PRIOR
                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
R FILING DATE:
R APPLICATION N
FILING DATE:
                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091519 FIL1NG DATE: 1998-07-02
                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091478
F1LING DATE: 1998-07-02
APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-26
APPLICATION NUMBER: 60/090863
FILING DATE: 1998-06-26
APPLICATION NUMBER: 60/091360
                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                      FILING DATE:
                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090542
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-0
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  F1LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING
                                                     l Similarity 49.6
62; Conservative
                                                                                                                                                                                                                                                   LING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                   LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DATE:
                                                                                                     NUMBER: 60/092182
: 1998-07-09
                                                                                                                                                                           1998-07-02
                                                                                                                           1998-07-07
                                                                                                                                                     1998-07-07
                                                                                                                                                                                                 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                    1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-22
                                                                                                                                                                                                                                                                                                 .998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          998-06-23
                                                             44.2%;
49.6%;
                                                                                                                                                                                      60/091633
                                                                                                                                       60/091982
                                                                                                                                                               60/091978
                                                                                                                                                                                                              60/091626
                                                                                                                                                                                                                                                                                                                                                           60/090862
                                                                                                                                                                                                                                                                                                                                                                                  969060/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090690
                                                                                                                                                                                                                                                                                                                                                                                                          60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090252
                                                      16;
                                                  Score 279.5;
Pred. No. 1.4e
16; Mismatches
                                                   1.4e-22;
hes 44;
                                                                          DB 9;
```

PRIOR PRIOR PRIOR

NUMBER: 60/089599 1998-06-17

1998-06-17

60/089598 60/089538 5-17

R APPLICATION NUMBER: (R FILING DATE: 1998-06 R APPLICATION NUMBER: (R FILING DATE: 1998-06 R FILING DATE: 1998-06

60/089907 6-18

FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0

NUMBER: 60/089653 1998-06-17

60/089801

1998-06-17

60/089600

APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:

1998-06-18 1998-06-1998-06-18

806680/09

R FILING DATE: 1998-06-19
R APPLICATION NUMBER: 60/08
R FILING DATE: 1998-06-19
PR APPLICATION NUMBER: 60/08
R FILING DATE: 1998-06-19

60/089952 60/089948 60/089947

60/090246

QΥ

61

GTEAEGSLGQADPSAETPTPRGSL,RK---ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF

Indels Length 124;

ω ••

Gaps

2

60 60 PRIOR PRIOR PRIOR PRIOR

FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-1

APPLICATION NUMBER: 60/089512 FILING DATE: 1998-06-16 APPLICATION NUMBER: 60/089514

FILING .DATE: 1998-06-16

NUMBER: 60/089440

1998-06-12

60/089105 60/088876 60/088861

APPLICATION

APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: 1998-06-11 APPLICATION NUMBER:

FILING DATE: 1998-06-16

NUMBER: 60/089532 1998-06-17

APPLICATION NUMBER: 60/088858

FILING DATE: 1998-06-1 APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-10

APPLICATION NUMBER: FILING DATE: 1998-06

1998-06-11

F1LING DATE: 1998-06-10 APPLICATION NUMBER: FILING DATE: 1998-06
APPLICATION NUMBER:

60/088826

1998-06-10 1998-06-10

60/088810 60/088824

FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088742 APPLICATION NUMBER: 60/088738

LING DATE:

FILING DATE: 1998-0 APPLICATION NUMBER:

FILING DATE: 1998-06-10

APPLICATION NUMBER: 60/088655

1998-06-09

60/088734

FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088217 APPLICATION NUMBER: 60/088212 FILING DATE: 1998-06-05 APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:

1998-06-05

60/088202 60/088167 60/088326 60/088033

LING DATE: 1998-06-05

FILING DATE: APPLICATION NUMBER:

1998-06-04 1998-06-04 1998-06-04

APPLICATION NUMBER: FILING DATE: 1998-0

APPLICATION NUMBER: F1LING DATE: 1998-0

APPLICATION NUMBER: F1L1NG DATE: 1998-0

1998-06-04

60/088029 60/088030

APPLICATION NUMBER:

60/088028

APPLICATION NUMBER: 60/088026 F1LING DATE: 1998-06-04

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 14
US-09-990-562-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 266, Appllcation US/09990562 Publication No. US20030027985Al GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C18 CURRENT APPLICATION NUMBER: US/09/990.562
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
PRIOR FILING DATE: 1997-11-12
PRIOR FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT FILING DATE: 2001-11-14 PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                        PRIOR
                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                          PRIOR
              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                    APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07 APPLICATION NUMBER: 60/087106
                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 6 FILING DATE: 1998-03-
                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1997-11-13
APPLICATION NUMBER: 60/066770
FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAERGDILRKADSSTNIFNPRGNLRKFQDFSGODPNILLSHLLARIWKPYKKRET-PDCF 119
                                                          APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WKYCI 123
FILING DATE: APPLICATION
                             APPLICATION NUMBER: 60/088021
                                                                                           FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                          FILING DATE: 1998-05-28
                                                                                                                                                                                                                                          FILING DATE: 1998-04-28
                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker, Kevln P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Watanabe, Colin K. Wililams, P. Mlckey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Goddard, Audrey
Godowskl, Paul J
Grlmaldi, J. Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerrltsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ferrara, Napolcone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Botstein,Davld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Kljavln, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austln L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Napler, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Margaret Ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Dan
                                                                                                                                                                                                                                                                                                                                                                    1997-11-13
                                                                                                                                           1998-06-02
                                                1998-06-03
                                                                                                             1998-06-02
                 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
                                                                                                                                                            60/087607
                                                                                                                                                                                                                                                                                         60/078910
                                                                                                                                                                                                                                                                                                                        60/075945
                                                               60/087827
                                                                                              60/087759
                                                                                                                             60/087609
                                                                                                                                                                                                                                                                                                                                                                                    60/065311
 60/088025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATE: 1996 OPRIOR FILING DATE: 1996 OPRIOR APPLICATION NUMBER: 1998-(
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1998-0 PRIOR APPLICATION NUMBER:
                                                                                                                   PRIOR PRIOR
                                                                                                                                  PRIOR FILING DATE: 1998-00 PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-00
                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-0 PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                    PRIOR
                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                   DR APPLICATION NUMBER: 6

OR FILING DATE: 1998-06

OR FILING DATE: 1998-06

OR APPLICATION NUMBER: 6

OR APPLICATION NUMBER: 6

OR APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088030
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/088029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-09
APPLICATION NUMBER: 60/088734
FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/088824 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088212 FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088202 FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/089598 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089599
                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/089532
                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                 FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-
                     APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-05
                                     1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-1
                                                                                                                                       1998-06-18
                                                                                                                                                                       1998-06-18
                                                                                                                                                                                                                                                                    1998-06-17
                                                                       1998-06-1
                                                                                                      1998-06-18
                                                                                                                                                                                                      1998-06-17
                                                                                                                                                                                                                                     1998-06-17
```

60/088217

60/088655

60/088810

60/088742

60/088826

60/088858

60/089105

60/088876

60/089514 60/089512 60/089440

60/089538

60/089907

60/089801 60/089653 60/089600

806680/09

60/089948

60/089947

60/0881.67

60/088033

60/088326

60/088028 60/088026

```
Вb
                                 δÃ
                                                               Matches
                                                                          Query Match
Best Local
                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                APPLICATION FILING DATE
                                                                                                                                                      FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/091982
                                                                                                                                                                     APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07
                                                                                                                                                                                              APPLICATION NUMBER: 60/091633 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090355
CAPPLICATION NUMBER: 60/090355
CONTING DATE: 1998-06-23
                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                          FILING DATE: 1998-07-02
                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                               APPLICATION
                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091478 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
              MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090444
MYKLASCCLLFTGFLNPLLSLPLLDSREISFOLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                       Similarity
                                                                                                                   DATE:
                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DATE:
                                                                                                                NUMBER: 60/
: 1998-07-09
                                                                                                                                                                                                                                                                                           NUMBER: 60/091544
                                                                                                                                         1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER: 60/090246: 1998-06-22
                                                                                                                                                                                                                                                                                1998-07-01
                                                                                                                                                                                                                                                                                                                                      1998-07-01
                                                                                                                                                                                                                                                                                                                                                                 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                            1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-25
                                                                                                                                                                                                                                                     1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-22
                                                                       44.2%;
49.6%;
                                                                                                                            60/092182
                                                                                                                                                                                                                                                                                                                                                  60/091360
                                                                                                                                                                                                                                                                                                                                                                            60/090863
                                                                                                                                                                                                                                                                                                                                                                                                       60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                  969060/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090254
                                                          16;
                                                   Score 279.5; DB y; Pred. No. 1.4e-22; "" wismatches 44;
                                                                               Length
                                                      Indels
                                                                                 124;
                                                     ω
                                                   Gaps
```

2

```
RESULT 15
US-09-997-428-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 266, A Publication No.
                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                              PRIOR
                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/997,428
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730p1C44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                           OR FILING DATE: 1998-06-02
PR APPLICATION NUMBER: 60/087609
OR FILING DATE: 1998-06-02
OR APPLICATION NUMBER: 60/087759
OR FILING DATE: 1998-06-02
OR APPLICATION NUMBER: 60/087827
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120 WKYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
 FILING DATE: APPLICATION N
                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/065186 FILING DATE: 1997-11-12
                                                                                                             FILING DATE: 1998-05-28
APPLICATION NUMBER: 60/087607
                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                           FILING DATE: 1998-04 APPLICATION NUMBER:
                                                                                                                                                                                                                                 FILING DATE: 1998-02-25
APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/065311
FILING DATE: 1997-11-13
                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                       FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ashkenazi, Avi J.
Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Zhang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Watanabe, Colin K.
Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
Gerritsen, Mary E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Paoni, Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kljavin, Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grimaldi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Godowski,Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09997428
o. US20030027162A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Margaret Ann
art, Timothy
             1998-06-03
                                                                                                                                                                                          1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zemin
                                                                                                                                                            1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Daniel
60/08802
                                                                                                                                           60/087106
                                                                                                                                                                           60/084600
                                                                                                                                                                                                        60/083322
                                                                                                                                                                                                                                                               60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    118
```

```
PRIOR FILING DATE: 1998-06-04
PRIOR APPLICATION NUMBER: 60/088326
PRIOR FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                  PRIOR
PRIOR
                                                                                                                                                                                                                                        PR10R
                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                      PR1OR
                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OR APPLICATION NUMBER: 60/088738
OR FILING DATE: 1998-06-10
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088742
OR FILING DATE: 1999-06-10
OR APPLICATION NUMBER: 60/088824
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088826
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088826
OR FILING DATE: 1998-06-10
OR APPLICATION NUMBER: 60/088858
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/08861
OR FILING DATE: 1998-06-11
OR APPLICATION NUMBER: 60/08861
                                                                                                                                                                                                                                                                          DR APPLICATION NUMBER: 60/089532
DR FILING DATE: 1998-06-17
DR APPLICATION NUMBER: 60/089538
DR APPLICATION NUMBER: 60/089598
DR APPLICATION NUMBER: 60/089599
DR FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/088030 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-09
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088217
FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/088029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION : FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-05
APPLICATION NUMBER: 60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-00
APPLICATION NUMBER:
FILING DATE: 1998-00
APPLICATION NUMBER: 60/089948 FILING DATE: 1998-06-19
                                      FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/089947
FILING DATE: 1998-06-19
                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                  FILING DATE: 1998-06-17
                                                                                                                                                                                                                                        F1L1NG DATE:
                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER: 60/
: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-16
                                                                                                                                                              1998-06-18
                                                                                                                                                                                                                                            1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-16
                                                                                                                        1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/088026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/089105
                                                                                                                                                                                  60/089801
                                                                                                                                                                                                                        60/089653
                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089514
                                                                                                    60/089908
                                                                                                                                            60/089907
                                                                                                                                                                                                                                                              60/089600
```

```
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                             PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                PRIOR
                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                PRIOR
                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OR FILING DATE: 1998-06-24
OR APPLICATION NUMBER: 60/090435
OR FILING DATE: 1998-06-24
OR APPLICATION NUMBER: 60/090444
OR FILING DATE: 1998-06-24
OR FILING DATE: 1998-06-24
OR APPLICATION NUMBER: 60/090472
OR APPLICATION NUMBER: 60/090472
OR APPLICATION NUMBER: 60/090535
OR FILING DATE: 1998-06-24
OR APPLICATION NUMBER: 60/090535
OR APPLICATION NUMBER: 60/090536
OR APPLICATION NUMBER: 60/090540
OR FILING DATE: 1998-07-02
OR APPLICATION NUMBER: 60/091633
OR FILING DATE: 1998-07-02
OR APPLICATION NUMBER: 60/091978
OR FILING DATE: 1998-07-07
OR APPLICATION NUMBER: 60/091982
OR FILING DATE: 1998-07-07
OR APPLICATION NUMBER: 60/092182
OR FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-19
APPLICATION NUMBER: 60/090246
FILING DATE: 1998-06-22
APPLICATION NUMBER: 60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090349 FILING DATE: 1998-06-23 APPLICATION NUMBER: 60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/
FILING DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                               FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/
FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-26
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                             APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                              FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 6 FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-24
                                                                                                                                                                  1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090542
                                                                                                                                                  60/091626
                                                                                                                                                                                 60/091519
                                                                                                                                                                                                                  60/091544
                                                                                                                                                                                                                                                                                 60/091360
                                                                                                                                                                                                                                                                                                                                               60/090862
                                                                                                                                                                                                                                                                                                                                                                             60/090696
                                                                                                                                                                                                                                                                                                                                                                                                              60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090694
                                                                                                                                                                                                                                                                                                              60/090863
```

Ş 밁 Query Match Best Local Matches Match MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60 MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 62; Conservative 44.28; 16; Score 279.5; DB 9 Pred. No. 1.4e-22; Mismatches 9 Indels Length 124; ω --Gaps 60

	Search completed: March 10, 2003, 17:48:53 Job time: 9.64054 secs	Db 120 WKYCV 124	Qy 119 WKYCI 123.	Db 61 GAERGDILKKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKRET-PDCF 119	Qy 61 GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
		. :	•	: PDCF 119	PECF 118
1			,		

THIS PAGE BLANK (USPTO)

Database : Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries Minimum DB seq length: 0
Maximum DB seq length: 2000000000 Total number of hits satisfying chosen parameters: Title: Perfect score: Searched: OM protein - protein search, using sw model Scoring table: Sequence: Run on: BLOSUM62 Gapop 10.0 , Gapext 0.5 March 10, 2003, 17:36:23; Search time 13.2973 Seconds (without alignments) 889.243 Million cell updates/sec 283224 seqs, 96134422 residues US-09-831-907A-30 633 1 MDRVPFCCLLFVGLLNPLLS.....TRKQRKQHGTAPECFWKYCI 123 PIR_73:* GenCore version 5.1.3 Compugen Ltd. pir1:*
pir2:*
pir3:* 283224

SUMMARIES

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

																									٠			No.	0
28 29	27	45	25	24	2	22	22	2.0	19	18	17	16	15	14	13	12	11	10	9	8	7	σ	u	4	w	Ν	بر	No.	+
71 70:5	71	71	71	71.5	71.5	71.5	71.5	71.5	72	72.5	72.5	73	73	74	74	74	74.5	74.5	75	76	77.5	80.5	81.5	85	85.5	104	107	Score	
	11.2								11.4	11.5	•	•	11.5	11.7	•	•	•		11.8				•			16.4		Match	9
4588 171	2342	1373	1196	939	893	886	409	404	920	927	404	1374	920	2399	2399	1076	708	468	523	468	760	783	906	83	783	125	125	Match Length	
22	Ν	N	N						N	N	ᆫ	N	N	N	N		2	N	N I	s c	J :	J I	N I	Ν	N	N	2	DB.	
T28667 AI1962	_	E97722	н86849	AB0032	E72232	T01125	D64135	A82121	G87075	A45039	QQBE13	A71724	AD0700	АН3009	F98274	A35622	H82751	E87400	S42727	231173	777770	AF1365	G70767	S10706	AG1627	I50498	I50499	ID.	
dynein beta heavy hypothetical prote	hypothetical		hynothetical prote	two-component sens		hypothetical prote	dihydrolipoamide	2-oxoglutarate deb	probable helicase	CTF4 protein - v	BMRF1 protoin - h		probable two-compo	non-ribocomil no-t			Oxidoreductase,	Cranstation in	giutamate-tRNA lig	ribonuclease -	single-stranded-DN	e hei	urotensin II precu	studied stranged DN	ordin it menocore		: :	Description	

										٧.	:						
45	44	43	42	41	40	39	, <u>u</u>) \	1 0		ມ (ກີ.	ىد 4	ω	32	<u></u>	30	
69	69	69.5	69.5	69.5	69.5	69.5	69.5	2	1 >		70.	70 5	70.5	70.5	70.5	70.5	
10.9	10.9	11.0	11.0	11.0	11.0	11.0	11.0	11.1	11.1	11.1	1 1	11 1	11.1	11.1	11.1	11.1	
354	331	1096	381	337	337	234	168	1356	TOPT	1249	1 4	0 0	ر د د	360	207	190	
N	N	N	_	N	N	N	N	2	~	\ \) (J	N	N	Ν	
C90882	S33223	T13802	PNKBP	T02723	T02722	PQ0179	T25189	E87311	C88690	T02/94	T1/233	9,7010	576616	T47170	S03754	A88961	
probable transcrip	transoriation fact	מפחליים במרימוומצל (פר	heta-lactamaco (EC	olvoeraldehvde-3-5	olvoeraldehvde-3-p	olvoeraldehvde-3-n	hypothetical prote	DNA-directed RNA p	protein F41Hl0.4 (probable membrane	hypothetical prote	nyputhetical prote.	my pooriection proce	hunothotical proto	fimbrial protein p	protein F59A7.4 //	

ALIGNMENTS

Query Match
A;Residues: Î-125 <ohs> A;Cross-references: GB:M14084; NID:g213066; PIDN:AAA49215.1; PID:g213067 C;Superfamily: urotensin II</ohs>
A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA
A;Title: Cloning and sequence analysis of cDNAs encoding precursors of urotensin II-a A;Reference number: I50498; MUID:86307061; PMID:2427672 A;Accession: I50498
R;Ohsako, S.; Ishida, I.; Ichikawa, T.; Deguchi, T. J. Neurosci. 6, 2730–2735, 1986
urotensin i1-alpha precursor - common carp C;Species: Cyprinus carpio (common carp) C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 16-Jul-1999 C;Accession: I50498
RESULT 2 I50498
66
QY 7 CCLLEVGLLNPLLSFPVTDTGEMSLQLP-VLEENALRALEELERTALLQTLRQTVGTEAE 65
Query M Best Lo Matches
A;Residues: 1-125 <ohs> A;Cross-references: GB:M14088; NID:g213068; PIDN:AAA49216.1; PID:g213069 C;Superfamily: urotensin II</ohs>
A;Status: preliminary; translated from GB/EMBL/DDBJ A;Molecule type: mRNA
A, Title: Cloning and sequence analysis of cDNAs encoding precursors of urotensin II-a A, Reference number: 150498; MUID:86307061; PMID:2427672 A, Accession: 150499
R;Ohsako, S.; Ishida, I.; Ichikawa, T.; Deguchi, T. J. Neurosci. 6, 2730–2735, 1986

δõ Query Match 16.4%; Score 104; DB 2; Length 125; Best Local Similarity 25.8%; Pred. No. 0.0054; Matches 32; Conservative 23; Mismatches 55; Indels 14; Gaps 14 LLNPLLSF-------PVTDTGEMSLQLP-VLEENALRALEELERTALLQTLRQT 59

2;

```
A;Status: rac-
A;Molecule type: DNA
A;Molecule type: DNA
A;Residues: 1-783 <GLA>
A;Cross-references: GB:AL592022; PIDN:CAC96791.1;
A;Cross-references: Strain Clipl1262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D; Jones, L.M.; Karst, U.
Science 294, 849-852, 2001
Science 294, 849-852, 2001
A;Authors: Kreft, J.; Kuln, M.; Kunst, F.; Kurapkat, G.; Madueno, E.;
Ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.;
ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J.A.;
A;Title: Comparative genomics of Listeria species.
A;Reference number: AB1077; MUID:21537279; PMID:11679669
A;Accession: AG1627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
S10706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Listeria innocua
C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 27-Nov-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     single-stranded-DNA-specific exonuclease (RecJ) homolog lin1560 [imported] - Listeria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                    R;Conlon, J.M.; Arnold-Reed, D.; Balment, FEBS Lett. 266, 37-40, 1990
A;Title: Post-translational processing of A;Reference number: $10706; MUID:90306357; A;Accession: $10706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R;Glaser, P.; Frangeui, L.; Buchrieser, C.; Amend, A.; Baquero, F.; Berche, P.;
.; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; Entian, K.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C;Accession: AG1627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AG1627
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT
                                                                                                                                                            C;Keywords: neuropeptide; osmoreguiation F;1-71/Product: urotensin II #status experimental <MAT> F;72-83/Domain: carboxyl-terminal propeptide #status ex
                                                                                                                                                                                                                                                                                                                                                                                                                                   C:Date: 19-Mar-1997 #sequence_revision 21-Nov-1998 #text_change 21-Nov-1998
C:Accession: S10706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            urotensin 11 precursor - European flounder (fragments) C;Species: Platichthys flesus (European flounder)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                             A; Experimental source: urophyse C; Superfamily: urotensin 1I
                                                                                                                                                                                                                                                                         A; Molecule type: protein A; Residues: 1-83 <CON>
  S
                                           Query Match
Best Local S
Matches 30
                                                                                                                                          ;77-82/Disulfide bonds: #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Dominguez-Bernal, G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           122 KYCV 125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    120 KYC1 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    279 LAPRLNAVGRLGPADPAADLLLTEDPEEALFLAEE1DDAN------KERKQ 323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62 AVVEYSPILSRENIKVPGQ1PKEALRELLLEKPYRL1PPSGLWGSRRQFRKRGGGADCFW 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              62 ----TEAEGSLGQADPSAE---TPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQ 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N
22 PVTDTGEMSLQLPV-LEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTP 80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     9 LLFVGLLNPLLSFPVTDTGEMSLQLPV--LEENALRALEELERTALL---QTLRQTVG--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             lin1560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VGTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFW 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LVAVGTVADLVS--LTDENRLLVQLGLRQLRENANLGLAVLAKKASLKLEEATEETIGFG 278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13.5%;
                                                                       13.4%;
27.5%;
                                                                                                                                                                                                                                                                                                                                              processing of prepro-urotensin MUID:90306357; PMID:2365069
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      16; Mismatches
                                                  12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 85.5; D
Pred. No. 2.9;
                                                                       Score 85;
Pred. No.
                                                  Mismatches
                                                                                                                                                                 #status experimental
                                                                         .23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PID:g16414047; GSPDB:GN00178
                                                     33
;
                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 783;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1ndels
                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                         H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Maitournam,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Voss, H.; Wehland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6
                                                       Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Bioecker
Fsihi, H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Α.;
```

```
probable helicase helY - Mycobacterium tuberculosis (strain H37RV)
C:Species: Mycobacterium tuberculosis
C:Date: 17-Jul-1998 #sequence_revision 17-Jul-1998 #text_change 22
C:Accession: G70767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ъ
                                                                                                                                                                                                                                                                                                                            A;Status: preliminary; nucleic acid sequence not shown; translation not shown A;Molecule type: DNA A;Residues: 1-906 <COL>
                                                                                                                                                                                                                                                                                                                                                                                       A;Authors: Sqares, R.; Súlston, J.E.; Taylor, K.; Whitehead, S.; Barrell, B.G. A;Title: Deciphering the biology of Mycobacterium tuberculosis from the complete A;Reference number: A70500; MUID:98295987; PMID:9634230 A;Accession: G70767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            G70767
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rajandream, M.A.; Rogers, Nature 393, 537-544, 1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     R;Cole, S.T.:
    밁
                                       δõ
                                                                                 밁
                                                                                                                       δõ
                                                                                                                                                                                                                                                                   A; Experimental source: strain C; Genetics:
                                                                                                                                                                                                                                                                                      A;Cross-references: GB:Z73966; GB:AL123456; NID:g3261577; PIDN:CAA98204.1; PID:e24701
A;Experimental source: strain H37RV
                                                                                                                                                                                                                                                A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Connor, R.; Davies, R.;
                                                                                                                                                                   Matches
                                                                                                                                                                                    Query Match
Best Local :
770 SAVVYETRGGDGQGAPFGADVPTPR--LRQAL-----TQTSRLSTTLRADEQAHRITP
                                                                               711 FYGLLTEREFIDGPATDPYVTDDGRLLARIYSESDLLVAECL-RTGAWEGLKPAELAGVV 769
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     81
                                                                                                                           11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RGAGLRYATLEVLLEKQSLLNPFSRVFG----IRKQFAGTTECFWKYCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RG-----SLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PITESAEMPYPGPASLEERGVGSLDDL---
                                                                                                                       FVGLL--NPLLSFPVTD---TGEMSLQLPVLEENALRÅLEELERTALLQTLR------ 57
                                     QTVGTEAEGSLGQADP-SAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAP 115
                                                                                                                                                                 l Similarity
39; Conserv
                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Parkhill, J.; Garnièr, T.; Churcher, C.; Harris, D
Deviin, K.; Feltwell, T.; Gentles, S.; Hamiin, N.;
J.; Rutter, S.; Seeger, K.; Skelton, S.; Squares,
                                                                                                                                                                                      12.9%;
                                                                                                                                                                   9;
                                                                                                                                                                                      Score 81.5; D
Pred. No. 8.5;
                                                                                                                                                                     Mismatches
                                                                                                                                                                                                             DΒ
                                                                                                                                                                     48;
                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #text_change 22-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ----SLSEQN----YPPQ
                                                                                                                                                                                                             Length 906;
                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                     23;
                                                                                                                                                                       Gaps
            820
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               D. ;
                                                                                                                                                                         7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          HoirOyd,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gordon
                                                                                                                                                                                                                                                                                                                                                                                                                                           geno
```

A; Authors: Kreft, J.; Kuhn, M.; Kunst, F.; Kurapkat, G.; Madueno, ok, C.; Schlueter, T.; Simoes, N.; Tierrez, A.; Vazquez-Boland, J. A; Title: Comparative genomics of Listeria species. A; Reference number: AB1077; MUID:21537279; PMID:11679669 A; Accession: AE1265 D.; Jones, L.M.; Karst, U. Science 294, 849-852, 2001 R;Glaser, P.; Frangeul, L.; Buchrieser, C.; Amend, A.; Baquero, I.; Dominguez-Bernal, G.; Duchaud, E.; Durand, L.; Dussurget, O.; C; Accession: AE1265 C;Species: Listeria monocytogenes C;Date: 27-Nov-2001 #sequence_revision 27-Nov-2001 #text_change 27-Nov-2001 single-stranded-DNA-specific exonuclease (RecJ) homolog 1mo1525 [imported] - Listeria A;Cross-references: GB:NC_003210; PIDN:CAC99603.1; A;Experimental source: strain EGD-e A; Molecule type: DNA A; Residues: 1-783 <GLA> A;Gene: A; Status: preliminary Genetics: Local lmo1525 Similarity Conservative 12.7%; 31.0%; 17; Pred. Score Mismatches No. 8.9; DB <u>ب</u> 36; PID:g16410954; GSPDB:GN00177 Length 783; O, E.; J.A.; F.; Berche, P.; ; Entian, K.D.; I 27; Gaps Maitournam, Voss, H.; W g ; Bloec Fsihi, Wehla A

Вþ

221

9 LLFVGLLNPLLSFPVTDTGEMSLQLPV--LEENALRALEELERTALL---QTLRQTVG-- 61

LVAVGTVADLVS--LTDENRLLVQLGLRQLRESANLGLAVLAKKASLKLEEATEET1GFG 278

3

```
A:Residues: 1-468 <NUR>
A:Residues: 1-468 <NUR>
A:Cross-references: EMBL:X64557; NID:g48241; PIDN:CAA45854.1; PID:g48242
A:Note: the sequence from Fig. 4 is inconsistent with that from Fig. 3 in a Mote: the source is designated as Thermus thermophilus
                                                                                                                                                   A:Note: the source is designated as Thermus thermophilus C:Superfamily: glutamate-tRNA ligase; glutamine-tRNA ligase homology C:Keywords: aminoacyl-tRNA synthetase; ligase; protein biosynthesis F:2-310/Domain: glutamine-tRNA ligase homology <EGL>
                 뫄
                                                 Qγ
                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-40 < NU2>
                                                                                                                                                                                                                                                                                                                                                                                Eur. J. Biochem. 204, 465-472, 1992
A:Title: Glutamyl-trNA synthetase from Thermus thermophilus HB8.
A:Reference number: S21172; MUID:92174899; PMID:1541262
A:Accession: S21172
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Accession: S21172; S21236
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Deinococcus radiodurans
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 17-Mar-2000
C;Accession: F75530
R;White, O; Eisen, J.A.; Heidelberg, J.F.; Hickey, E.K.; Peterson, J.D.; Do, M.; Shen, M.; Vanathevan, J.J.; Lam, P.; McDonald, L.; Utterback, T.; Zalu S.; Smith, H.O.; Venter, J.C.; Fraser, C.M.
Science 286, 1571-1577, 1999
                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                glutamate-tRNA ligase (EC 6.1.1.17) - Thermus aquaticus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      R; Nureki,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C;Date:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  뮹
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Superfamily:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Map position:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Gene: DR0353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Cross-references: GB:AE001895;
A;Experimental source: strain R1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-760 <WHI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Title: Genome sequence of the radioresistant bacterium Deinococcus radiodurans A; Reference number: A75250; MUID:20036896; PMID:10567266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; Accession: F75530
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ribonuclease - Deinococcus radiodurans (strain R1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q
                                                                                        Matches
                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Species: Thermus aquaticus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 433 VDKDGRMEL-IPIREETARGMIEDLMLLANKVVAHYLIEREIPTLFRIHEEPTLQKFQDV
                                                   21
                                                                                                         Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23 VTDTGEMSLQLPVLEENALRALEELERTA-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               279 LAPRLNAVGRLGPADPAADLLLTEDPEEALFLAEEIDDAN---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             22-Nov-1993 #sequence_revision
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             62
                        FPVTDTGEMSLQ--LPVLEE--NALRALEELERTALLQTLRQTVGTEAEG--SLGQ-ADP 73
YPVSEKAQRKLEEGLPLLKELYPRLRAQEEWTEAALEALLR---GFAAEKGVKLGQVAQP 433
                                                                                                                                                                                                                                                                                                                                                                                                                                    O.; Suzuki, K.; Hara-Yokoyama, M.; Kohno, T.; Matsuzawa, H.; iochem. 204, 465-472, 1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VGTEAEGSLGQADPSAETPTPRG--SLRKALTGQDSNTVLSRLLARTRKQRKQHG 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TG--AIGRLGFSFPGGE-PTPQAYQAVLKQVRGTGRESVVNTLLLRSMQQAKYAG 543
                                                                                        35;
                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         l Similarity
32; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -TEAEGSLGQADPSAE---TPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      virulence-associated protein vacB homolog
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                   12.0%;
36.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12.2%;
27.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15;
                                                                                    9;
                                                                                                 Score 76;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GB:AE000513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 77.5;
Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-Dec-1995 #text_change 03-Jun-2002
                                                                                             DB
13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NID:g6458024; PIDN:AAF09933.1; PID:g64580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DВ
                                                                                                                   2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length
                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ------LLQTLRQT 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -KERKQ
                                                                            20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29;
                                                                                                                                                                                                                                                                                                                                                                                                              Molecular cloning of
                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J.D.; Dodson,
T.; Zalewski,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ohta,
                                                                                                                                                                                                                                                                                                 having
                                                                        6
                                                                                                                                                                                                                                                                                                                                                                                                                                                       T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5.
                                                                                                                                                                                                                                                                                                 67-Thr
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shimiz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            R.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                #
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .
X
               RESULT
H82751
                                                                                                                        QУ
```

```
C;Date: 19-Mai 27.7
C;Accession: $42727
R;Price, N.T.; Francia, G.; Hall, L.; Proud, C.G.
Biochim. Biophys. Acta 1217, 207-210, 1994
A;Title: Guanine nucleotide exchange factor for eukaryotic
                              δÃ
                                                             Db
                                                                                     Qy
       밁
                                                                                                                                                                    A;Note: the authors translated the codon C;Superfamily: translation regulator GCD2
                                                                                                                                                                                                                                                                                                                                                                                 RESULT
S42727
                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-523 < PR
                                                                                                                                                                                                                                                                                                                            translation initiation factor eIF-2 delta chain - | C:Species: Oryctolagus cuniculus (domestic rabbit) C:Date: 19-Mar-1997 #sequence_revision 19-Mar-1997
                                                                                                                                                                                                                                                                                                                                                                translation
                                                                                                                                                                                                                                                                                                                                                                                                                                         Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                               Query Match
Best Local
                                                                                                                  Matches
                          101 LARTRKQ----RKQHGTAPECF 118
    159
                                                            104
                                                                                                                                                                                                                                                                                                                                                                                                                                         434
                                                                                        42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  74
                                                 RAKQEAER-----ALKQARKGEQGGPPPQASPSTAGEAPAGGKRLTEHTQADDPTLLRRL 158
                                                                          RALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTPRGSLR-KALTGQDSNTVLSRL 100
VRKSERQQVPTRKDYGSKVSLF 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                          SAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQR
                                                                                                                                                                                                    1-523 <PRI>
                                                                                                                              Similarity
                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                  -LRAALTGSLETPGLFEILALLGKER
                                                                                                                            11.8%; 32.9%;
                                                                                                            9;. Mismatches
                                                                                                                           Score 75;
Pred. No.
                                                                                                                                                                                  AGG
                                                                                                                        DB
19;
                                                                                                                                                                                  for residue
                                                                                                                                                                                                                                                                                                                                                                                                                                                             108
                                                                                                                                                                                                                                                                                                                                                                                                                                   458
                                                                                                                                         ۲,
                                                                                                                                                                                                                                                                                                                                                          rabbit
                                                                                                              36;
                                                                                                                                      Length 523
                                                                                                                                                                                                                                                                                                                           #text_change
                                                                                                           Indels
                                                                                                                                                                                 370 as
                                                                                                                                                                                                                                                                     initiation
                                                                                                                                                                              Ser,
                                                                                                           10;
                                                                                                                                                                                                                                                                                                                            17-Nov-2000
                                                                                                        Gaps
                                                                                                                                                                                GCA for
                                                                                                                                                                                                                                                                   factor-2.
                                                                                                         ω
                                                                                                                                                                              residue
                                                                                                                                                                                                                                                                   Cloni
```

```
밁
                                                       Qγ
                                                                                                                                                                                     C;Superfamily:
                                                                                                                                                                                                             C;Genetics:
A;Gene: CC1219
                                                                                                                                                                                                                                      A;Cross-references: GB:AE005673; NID:gl3422545; PIDN:AAK23201.1; GSPDB:GN00148
                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-468 <STO>
                                                                                                                                                                                                                                                                                                                                                n, J.; Ermolaeva, m.; milte, C.; Tille: Complete Genome Sequence of Caulobacter crescentus A;Title: Complete Genome Sequence of Caulobacter crescentus
                                                                                                                                                                                                                                                                                                                                                                                     R;Nierman, W.C.; Feldblyum, T.V.; Paulsen, I.T.; Nelson, K.E.; Eisen, J.; Heidelberg, B.; Laub, M.T.; DeBoy, R.T.; Dodson, R.J.; Durkin, A.S.; Gwinn, M.L.; Haft, D.H.; Kon, J.; Ermolaeva, M.; White, O.; Salzberg, S.L.; Shapiro, L.; Venter, J.C.; Fraser, C. Proc. Natl. Acad. Sci. U.S.A. 98, 4136-4141, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Date: 20-Apr-2001 #sequence_revision 20-Apr-2001 #text_change 10-May-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          oxidoreductase, FAD-binding CC1219 [imported] - Caulobacter crescentus C;Species: Caulobacter crescentus
                                                                                                                                                                                                                                                                                                                   A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                              A; Accession: E87400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C; Accession:
                                                                                                        Matches
                                                                                                                         Query Match
Best·Local (
                 337
EMEFHLPV--ENQLKALEEVMRT--IETERPDVFFPIEVRRIAADDAWLSPFYAAPRGSV 392
                                          EMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETP---TPRGSL
                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E87400
                                                                                                                                                                                 L-gulonolactone oxidase
                                                                                                 Conservative
                                                                                                                   11.8%;
37.7%;
                                                                                               9;
                                                                                                                Score 74.5;
Pred. No. 19;
                                                                                               Mismatches
                                                                                                                                      DB
                                                                                          32;
                                                                                                                                  Length
                                                                                        Indels
                                                                                        7;
                                                                                    Gaps
                                            84
                                                                                      ω
```

ATP-dependent helicase XF0882 [imported] - Xylella fastidiosa

(strain 9a5c)

밁

393

AVHAYYRDDFTFLYELI

409

RKALTGQDSNTVLSRLL 101

```
R;Simpson, A.J.G.; Reinach, F.C.; Arruda, P.; Abreu, F.A.; Acencio, M.; Alvarenga, R.; Albrones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carrer, H. Briones, M.R.S.; Bueno, M.R.P.; Camargo, A.A.; Camargo, L.E.A.; Carraro, D.M.; Carrer, H. as-Neto, E.; Docena, C.; El-Dorry, H.; Facincani, A.P.; Ferreira, A.J.S.; submitted to GenBank, June 2000
A;Authors: Ferreira, V.C.A.; Ferro, J.A.; Fraga, J.S.; Franca, S.C.; Franco, M.C.; Frohm J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Laigu J.D.; Junqueira, M.L.; Kemper, E.L.; Kitajima, J.P.; Krieger, J.E.; Kuramae, E.E.; Laigu J.A.; Marino, C.L.; Marques, M.V.; Martins, E.A.; Mathors: Martins, E.M.F.; Matsukuma, A.Y.; Menck, C.F.M.; Miracca, E.C.; Mispaki, C.Y.; F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Oliveira, R.C.; Palmieri, D.P.; F.G.; Nunes, L.R.; Oliveira, M.A.; de Oliveira, M.C.; de Sa, R.G.; Santelli, R.V.; Sawasak A;Authors: da Silva, A.C.; da Silva, F.R.; da Silva, A.M.; Silva Jr., W.A.; da Silva, A.S.; Vettore, A.L.; M.; Tsuhako, M.H.; Vallada, H.; Van Sluys, M.A.; Verjovski-Almeida, S.; Vettore, A.L.; A.S.; Vertore, A.L.; A.S.; Verto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Accession: H82751
R;anonymous, The Xyleila fastidiosa Consortium of the Organization for Nucleotide R;anonymous, The Xyleila fastidiosa Consortium of the Organization for Nucleotide Nature 406, 151-157, 2000
A;Title: The genome sequence of the plant pathogen Xyleila fastidiosa.
A;Reference number: A82515; MUID:20365717; PMID:10910347
A;Note: for a complete list of authors see reference number A59328 below
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C;Species: xylella fastidiosa
C;Date: 18-Aug-2000 #sequence_revision 20-Aug-2000 #text_change 20-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Cross-references: GB:AE003927; GB:AE003849; NID:g9105783; P1DN:AAF83692.1; GSPDB:GN001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Residues: 1-708 <SIM>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Accession: H82751
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Experimental source: strain 9a5c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Date: 22-Jan-1993 #sequence_revision 08-Mar-1996 #text_change 21-Jul-2000 C;Accession: A35622; S61658; S66983 R;Davis, L.I.; Fink, G.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N;Alternate names: nucleoporin; protein 03182; C;Species: Saccharomyces cerevisiae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Reference number: A59328
A; Reference number: S66965
A; Accession: S66983
A; Molecule type: DNA
                                                                                                                                      A;Molecule type: DNA
A;Residues: 1-1076 <BEN>
A;Coss-references: EMBL:X94335; N1D:g1262139; PIDN:CAA64020.1;
A;Cross-references: EMBL:X94335; N1D:g1262139; PIDN:CAA64020.1;
R;Voss, H.; Benes, V.; Rechmann, S.; Teodoru, C.; Schwager, C.;
submitted to the Protein Sequence Database, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Benes, V.; Andrade, M.A.; Rechmann, S.; Teodoru, C.; Banrevi, A.; submitted to the EMBL Data Library, December 1995
A;Description: Nucleotide sequence and analysis of a 130 kb fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: A35622; A; Accession: A35622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Title: The NUP1 gene encodes an essential component of A; Reference number: A35622; MUID:90275616; PMID:2190694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R; Davis, L.I.; Fink, G. Cell 61, 965-978, 1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              nuclear pore protein NUP1 - yeast (Saccharomyces cerevisiae)
                                                                                                                                                                                                                                                                                                                                                                  A; Reference number: S61643
A; Accession: S61658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Molecule type: DNA
A;Molecule type: CDAV
A;Residues:.1-1076 <CDAV>
A;Residues:.1-1076 <CDAV>
A;Cross-references: EMBL.M33632; NID:g172055; P1DN:AAA34822.1; PID:g172056
A;Experimental source: Strain S288C
A;Experimental source: Strain S288C
A;Experimental source: Strain S288C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contents: annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             322 LRAAMEGLPSRGTQSRLLAK 341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         32 QLPVLEEN-----ALRALEELERTALLQTLRQTVGTEA--EGSLGQADPSAETPTPRGS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QLPALAANFFGESFGMRPLQELGRDCM1EA-RSVAGAQAALQHSVWQLEQALRT-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 74.5;
Pred. No. 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein YOR098c; protein YOR3182c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         fragment of yeast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     yeast nuclear pore complex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15;
                                                                                                                                                                                                             Paces,
                                                                                                                                                                                                                                                    PID:g1164945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                  Ansorge,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Valencia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequer
                                                                                                                                                                                                                  Σ
```

```
A;Cross-references: EMBL:Z75006; NID:gl420274; PlDN:CAA99295.1; PlD:gl420275; GSPDB:G A;Experimental source: strain S288C C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Map position: 15R C; Superfamily: nuclear pore protein NUP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Residues: 1-1076 < VQS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Title: Genome Sequence of the Plant Pathogen and Biotechnology Agent Agrobacterium A;Reference number: A97359; PMID:11743194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Accession: F98274
R;Goodner, B.; Hinkle, G.; Gattung, S.; Miller, N.; E
A.; Liu F.; Wollam, C.; Allinger, M.; Doughty, D.;
Science 294, 2323-2328, 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C;Species: Agrobacterium tumefactens
C;Date: 22-Oct-2001 #sequence_revision 22-Oct-2001 #text_change 11-Jan-2002
                                                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-2399 <KUR>
                                                                                                                                                                                                                                                                                                                                                                                                         A; Status: preliminary A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hypothetical protein AGR_L_2311 [imported] - Agrobacterium tumefaciens (strain
                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:AE007870; PIDN:AAK89720.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Accession: F98274
밁
                                   Š
                                                                          Вþ
                                                                                                            Š
                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                            A; Map position: linear chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                ; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Species: Agrobacterium tumefaciens
                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                     1927 LGRLRPEGLLEF----LGREDFQVKV---NGFRIELGEIE-TALLQNENVAEAVVTTMGQ 1978
                                                                        1979 PPAL1AYIVPDTKGSLIGKLEAKAGRSGNGGLGDAGRTVDLPTPDGLFHEAITRQSHRRF 2038
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           116 ECFW 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    205 GTVW 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17 PLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAE------GSL 68
                                                                                                                                                                           SGD:NUP1; MIPS:YQR098c
-references: SGD:S0005624; MIPS:YOR098c
                                                                                                                                                                                                                                    Local Similarity es 37; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SKSDEGGSYLCTSSTPSPIKNGSCTROLAGKSGEDTNVGLP1LKSLKNRSNRKRFHSQSK 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GQADP-----SAETPTP--RGSLRKAL---TGQDSNTVLSRLLA-RTRKQRKQ-HGTAP I15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       P111YGTENTERPPL-LP1LP1QRLRLLREKQRVRNMRELGLIQSTEFPSITSSVILGSQ 144
 LN---APTELQKIGH 2050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.7%;
                                                                                                                                                                                                                                                     11.78;
27.48;
                                                                                                                  ---LRQTVGTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTV 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 74; DB Pred. No. 55;
                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                         Pred.
                                                                                                                                                                                                                                                                         Score 74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                       No. 1.4e+02;
                                                                                                                                                                                                                                                                           DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48;
                                                                                                                                                                                                                                                                                                                                                                         PID:g15159634;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 1076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Blanchard, M.; ; Scott, C.; La;
                                                                                                                                                                                                                                                                           Length 2399;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Lappas,
                                                                                                                                                                                                                                           46;
                                                                                                                                                                                                                                                                                                                                                                             GSPDB:GN00170
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                      55
                                                                                                                                                                                                                                           7;
```

non-ribosomal peptide synthetase mtaD [imported] - C;Species: Agrobacterium tumefaciens C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002

11-Jan-2002 #text_chan9e 11-Jan-2002

Agrobacterium tumefaciens

(strain

AH3009

R; Wood, D.W.; Setubal, J.C.; Kaul, erage, G.; Gillet, W.; Grant, C.;

Karp,

P.; Romero, P.; 294, 2317-2323,

Zhang, 2001

S

ul, R.; Monks, .; Guenthner, |

D.,

Kutyavin,

D.; Chen, L.; Wood, G.E.; Chen, D.; Kutyavin, T.; Levy, R.; Li, I

Σ ..

, Woo

C; Accession: AH3009

Ľ,

```
Search completed: March 10, 2003, 17:47:27 Job time : 15.2973 secs
                                                                                       DЪ
                                                                                                                         δÃ
                                                                                                                                                                  Ъ
                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                            Ъ
                                                                                                                                                                                                                                                                               QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                , S.; Moule, S.; O'Gaora, r. Nature 413, 848-852, 2001
Nature 413, 848-852, 2001
A;Authors: Parry, C.; Quail, M.; Rutherford, K.; Simmonds, M.; Skelton, J.; Stevens, K.;
A;Title: Complete genome sequence of a multiple drug resistant Salmonella enterica seronal Perence number: ABO502; PMID:11677608
                                                                                                                                                                                                                                                                                                                                                                                                 A;Gene: ssrA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               probable two-component sensor kinase ssrA [imported] - Salmonella enterica subsp. C;Species: Salmonella enterica subsp. enterica serovar Typhi A;NOte: this species has also been called Salmonella typhi C;Date: 09-Nov-2001 #sequence_revision 09-Nov-2001 #text_change 09-Nov-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Molecule type: DNA
A; Residues: 1-920 <PAR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             R;Parkhill, J.; Dougan, G.; James,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DЪ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Qγ
                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                            Cross-references: GB:AL513382; PIDN:CAD01973.1; PID:916502815; GSPDB:GN00176
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Map position: linear chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: mtaD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A;Residues: 1-2399 <KUR>
A;Cross references: GB:AE008689; PIDN:AAL44494.1; PID:917742101; GSPDB:GN00187
A;Experimental source: strain C58 (Dupont)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: The Genome of the Natural Genetic Engineer Agrobacterium tumefaciens C58. A;Reference number: AB2577; PMID:11743193
A;Accession: AH3009
                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Status: preliminary A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Authors: Yoo, H.; Tao, Ý.; Biddle, P.; Jung, M.; Krespan, W.; Perry, M.; Gordon-Kamm,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         arkhill, J.; Dougan, G.; James, K.D.; Thomson, N.R.; Pickard, D.; Wain, J.; Churcher, T.; Connerton, P.; Cronin, A.; Davis, P.; Davies, R.M.; Dowd, L.; White, N.; Farrar
                                                                           425 PLNIEQQGLADTARNC 440
                                                                                                               105 RKQRKQHG---TAPEC 117
                                                                                                                                                                                                                  311 FCWLLHRSLAKPLWRFVDIINKTATAPLSTRLPA-----ORLDELDSIAGAFNQLLDTL 364
                                                                                                                                      365 QVQYDNLENKVAERTQALNEAKKRAEQANKRKSIHLTVISHELRTPMNGVLGAIELLQTT 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2039 LN---APTELOKIGH 2050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1927
                                                                                                                                                                            57 R-----QTVGTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLS-----RLLART 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1979 PPALIAYIVPDTKGSLIGKLEAKAGRSGNGGLGDAGRTVDLPTPDGLFHEAITRQSHRRF 2038
                                                                                                                                                                                                                                                                                                                                       Loca1
                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 97 LSRLLARTRKORKOH 111
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      12 VGLLNP--LLSFPVTDTGEMSLQLPVLEENALR-ALEELERTALLQT------ 55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity 27.4 les 37; Conservative
                                                                                                                                                                                                                                                    FCCLLFVGLLNPLLSF----PVTDTGENSLQLPVLEENALRALEELERTA-----LLQTL 56
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LGRLRPEGLLEF----LGREDFQVKV---NGFRIELGEIE-TALLQNENVAEAVVTTMGQ 1978
                                                                                                                                                                                                                                                                                                                   1 Similarity
37; Conser
                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                             11.5%; Score 73; 27.2%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11.78;
27.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              --LRQTVGTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTV 96
                                                                                                                                                                                                                                                                                                           15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 74; DB 2;
Pred. No. 1.4e+02;
                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                             DB 2; Length 920, 58;
                                                                                                                                                                                                                                                                                                       54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       43;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 2399;
                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                 30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    46;
                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              enter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            . .
```

mus

musculu

saccharomyc mus musculu haemophilus brucella me yersinia en yersinia pe

bovine papi synechococc salmonella bacillus st

```
Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                           Result
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Post-processing: Minimum Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Total number
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                  NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein
                   and is derived
                                                                                                                                                                                                                                                                                                                                541
282.5
128
107
104
85
                  81.5
75
75
72.5
72.5
72.7
72.7
72.7
71.5
70.5
70.5
70.5
69.5
69.5
69.5
68.5
68.5
68.5
68.5
68.5
                                                                                                                                                                                                                                                                                                                                                                                                                                Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            No. is the number of results predicted by chance to have a greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein search,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             length:
length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hits satisfying chosen parameters:
                 Match
                                                                                                                                                                                                                                                                                                                                                                                                                                          %
Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BLOSUM62
Gapop 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-831-907A-30
633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       March 10, 2003, 17:26:37;
                                                                                                                                                                                                                                                                                                                                                                                           100.0
85.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       112892 seqs, 41476328 residues
                                                                                                                                                                                                                                                                                                                    13.4
12.9
                                                                                                                                                                                                                                                                                                                                            20.2
16.9
16.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MDRVPFCCLLFVGLLNPLLS....
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version Copyright (c) 1993 - 2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by analysis of the total score distribution
                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2000000000
                Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               first
                                                                                                                                                                                                                                                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gapext
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               using
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        80
                                                                                                           UCP3_BOVIN
E2BD_HUMAN
NAF1_MOUSE
G3PE_MAIZE
                                              P2CG_MOUSE
                                                                        AMPC_ENTCL
PARE_HAEIN
ACF7_MOUSE
                                                                                                                                                                                                       LMG3_MOUSE
UCP3_CANFA
                                                                                                                                                                                                                                                                                                                                                                           UR2_RAT
UR2_MOUSE
UR2_HUMAN
                                                                                                                                                          RPOB_RICMA
FM2_BORPE
                                                                                                                                                                                 ODO2_HAEIN
RPOB_RICCN
                                                                                                                                                                                                                                POB1_YEAST
                                                                                                                                                                                                                                                         RPOB_RICPR
EAD_EBV
                                                                                                                                                                                                                                                                                E2BD_RABIT
NUP1_YEAST
                                                                                                                                                                                                                                                                                                      UR2_PLAFE
HELY_MYCTU
SYE_THETH
                                                                                                                                                                                                                                                                                                                                        UR2_RANRI
UR2G_CYPCA
UR2A_CYPCA
                                    вснн_снги
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 W.S
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Search time 6.98108 Seconds (without alignments) 730.773 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              5.1.3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Compugen Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                          O9qzq4 rattus norv
O9qzq3 mus musculu
O93z93 homo sapien
P33715 rana ridibu
P06580 cyprinus ca
P04560 cyprinus ca
P21857 platichthys
                       Q43247
P05364
P43703
Q9qxz0
Q61074
Q13164
Q50314
P14668
                                                                                                                               Q9ui10
                                                                                                                                                       Q9rh43
P05788
                                                                                                                                                                                                                                                     P20676
052271
P03191
                                                                                                                                                                                                                                                                                                    P21857
Q10701
P27000
                                                                                                                                            077792
                                                                                                                                                                                Q9rh41
                                                                                                                                                                                            P45302
                                                                                                                                                                                                                    Q9r0b6
                                                                                                                                                                                                                               8pqz60
                                                                                                                                                                                                                                           Q01454
                                                                                                                                                                                                                                                                                                                                                                                                                          Description
                                  chlorobium
                                                        mus musculu
                                                                                 enterobacte
haemophilus
                                                                                                        mus musculu
zea mays (m
                                                                                                                                                       rickettsia
bordetella
                                                                                                                                                                               rickettsia
                                                                                                                                                                                           haemophilus
                                                                                                                                                                                                      mus musculu
canis famil
                                                                                                                                                                                                                             saccharomyc
mycobacteri
                                                                                                                                                                                                                                                     rickettsia
epstein-bar
                                                                                                                                                                                                                                                                              saccharomyc
                                                                                                                                                                                                                                                                                       oryctolagus
                                                                                                                                nomo sapien
                                                                                                                                           bos taurus
                                                                                                                                                                                                                                                                                                    mycobacteri
thermus the
                                            homo sapien
         gall
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       , .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ٠,٠
                                                                                                                                                  RESULT 1
UR2_RAT
ID UR2_RAT
AC 0902
DT 16-C
DT 16-C
DT 16-C
OC EUK
OC EUK
OC MAN
OX NCE
RN CTI
RX ME
RX ME
RX ME
CC CC
CC T
CC T
CC CC
CC C
CC
                            Qy
        Ъ
                                                      В
                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ٠..
                                                                                                  Query Match
Best Local S
Matches 123
                                                                                                                                                  Hormone;
SIGNAL
PROPEP
PEPTIDE
DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35
35
37
37
39
39
411,
422,
                                                                                                                                                                                        InterPro: Involve,
Pfam; PF02083; Urotensin_II; 1.
PROSITE; PS00984; UROTENSIN_II; 1.
Hormone; Cleavage on pair of basic residues;
POTENTIAL.
POTENTIAL.
                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                         Coulouarn Y., Jegou S., Tostivint H., Vaudry "Cloning, sequence analysis and tissue distrat urotensin II precursors.";
FEBS Lett. 457:88-32(1999).
-i. FUNCTION: HIGHLY POTENT VASOCONSTRICTOR
-i. SUBCELLULAR LOCATION: Secreted.
-i. TISSUE SPECIFICITY: BRAIN-SPECIFIC.
                                                                                                                                                                                                                                                                            entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UR2_RAT STANDARD; PRT; 123 AA. 090Z04; 090Z04; 16-OCT-2001 (Rel. 40, Created) 16-OCT-2001 (Rel. 40, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update) Urccensin II precursor (U-II) (UII).
                                                                                                                                                                                                                                                           EMBL; AF172174; AAD55766.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE=Spinal cord;
MEDLINE=99416011; PubMed=10486557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10116;
                                                                                                                                                                                                                                              interPro; IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rattus norvegicus (Rat)
1 MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV
                                                      \vdash
                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0 0 0 0
0 0 0 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67
                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67
67
67
67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . . . . . .
                                                                                                  Conservative
                                                                                                                                                               21
110
117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
104
123
122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  374
630
269
354
604
878
1206
1343
1343
673
673
                                                                                                                                                 13614 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chordata;
Rođentia;
                                                                                                              100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Tostivint H , Vaudry
                                                                                                  0,
                                                                                                                                                        POTENTIAL.
UROTENSIN II.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FYUA_YEREN
FYUA_YERPE
APCE_PORPU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MSH4_YEAST
FM14_MOUSE
RPOB_HAEIN
RECA_BRUME
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ERGL_MOUSE
PARE_SALTY
TRPA_BACST
DCUP_SYNP7
                                                                                              Score 633; DB 1;
Pred. No. 6.4e-54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DCUP_SYNP7
VE1_BPV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                               E4F1A8EE124AF1EA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaudry H., Lil distribution
                                                                                                                                                                                                                                                                                                                                                                                                                  (BY
                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY).
                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lihrmann I
                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q8yh10
P46360
P46359
P51263
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q8vcd3
P31598
P19867
P16891
P11298
P40965
Q05859
P43738
```

mouse

and

0,

Gaps

0

60 60

Š

121

YC1

: 123

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT
                                                                                   δÃ
                                                                                                            g
                                                                                                                                  QΥ
                                                                                                                                                             DЬ
                                                                                                                                                                                   Ş
           UR2_HUMAN
                         RESULT 3
                                                            밁
 IJ
                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                              Matches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q9QZQ3;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last seg
15-JUN-2002 (Rel. 41, Last ann
                                                                                                                                                                                                                                                                            PEPTIDE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   UR2_MOUSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-99416011; PubMed-10486557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota;
UR2_HUMAN
                                                                                                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                        PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                      EMBL; AF172175; AAD55767.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                              entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to llcense@isb-slb.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute. The use by non-profit institutions as long modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEBS Lett. 457:28-32(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Coulouarn Y., Jegou S., Tostivint H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCB1_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mammalia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                            Hormone,
                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001483; Urotensin_II.
Pfam; PF02083; Urotensin_II; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Cloning, sequence analysis and tlssue rat urotensin II precursors.";
                                                                                                                                                                                                                                                                                                    PROPEP
                                                              121
                                                                                      121
                                                                                                                                                                                                                            Local
                                                                                                              61
                                                                                                                                      61
                                                                                                                                                               \mathbf{\mu}
                                                                                                                                                                                      SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: BRAIN-SPECIFIC. PREDOMINANTLY EXPRESSED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOTONEURONS OF THE BRAINSTEM AND SPINAL CORD. SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: HIGHLY POTENT VASOCONSTRICTOR (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YCI 123
                                                                                                                                                                          MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                           MGI:1346329;
                                                                                                                         GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK 120
                                                               YCI
                                                                                      YCI 123
                                                                                                              GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK
                                                                                                                                                              MDRVPFCCLLF IGLLNPLLSLP VTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                            Slmilarity
                                                                                                                                                                                                                                                                                                                           Cleavage on pair of basic residues;
                                                               123
                                                                                                                                                                                                                                                                                                                                          PS00984; UROTENSIN_11; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; Metazoa;
Eutheria;
                                                                                                                                                                                                                                                              21
110
117
117
123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Rel. 40, Last sequence up
(Rel. 41, Last annotation
I precursor (U-II) (UII).
                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cord;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                            Uts2.
                                                                                                                                                                                                                                                                           20
104
123
122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                 13625
                                                                                                                                                                                                                            85.5%;
                                                                                                                                                                                                                                                               MW;
                                                                                                                                                                                                                           Score 541; DB 1;
Pred. No. 4.1e-45;
                                                                                                                                                                                                                                                                                                    POTENTIAL. POTENTIAL.
                                                                                                                                                                                                                                                                            UROTENSIN II.
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
  PRT;
                                                                                                                                                                                                                                                               F96486195137F7F4 CRC64;
                                                                                                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaudry H., Lihrmann 1 e distribution of the
   124
                                                                                                                                                                                                                                                                                                                                                                                                                                                   There are no restrictions ong as its content is in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R
   Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                          Usage
                                                                                                                                                                                                                                                                                                                             Signal.
                                                                                                                                                                                                                                       Length 123;
                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                          bу
                                                                                                                                                                                                                                                                                                                                                                                                                                          and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    mouse and
                                                                                                                                                                                                                                                                                                                                                                                                                                          for
                                                                                                                                                                                                                  0;
                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                            commercial
                                                                                                                                                                  60
                                                                                                                                                                                                                                                                                                                                                                                                                                                        õ
                                                                                                                                                                                                                   0
```

```
Ş
                                                          Query Match
Best Local Similarity
                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   095399; Q9UKP7;
16-OCT-2001 (Rel. 40, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Urotensin II precursor (U-II) (UII).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Coulouarn Y., Lihrmann I., Jegou S., Anouar Y., Tostivint H., Beauvillain J.C., Conlon J.M., Bern H.A., Vaudry H.; Beauvillain J.C., Conlon J.M., Bern H.A., Vaudry H.; Conlon of the cDNA encoding the urotensin II precursor in frog and human reveals intense expression of the urotensin II gene in motoneurons of the spinal cord.";
                                                                                                     CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ames R.S., Sarau H.M., Chambers J.K., Willette R.N., Aiyar N.V., Romanic A.M., Louden C.S., Foley J.J., Sauermelch C.F., Coetney R.W. Ao Z., Disa J., Holmes S.D., Stadel J.M., Martin J.D., Liu W.-S., Glover G.I., Wilson S., McNulty D.E., Ellis C.E., Elshourbagy N.A., Shabon U., Trill J.J., Hay D.W.P., Ohlsteln E.H., Bergsma D.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
                                                                                                                                                   DISULFID CONFLICT
                                                                                                                                                                                                              Hormone;
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Submitted (DEC-1999) to the EMBL/GenBank/DDBJ databases i. FUNCTION: HIGHLY POTENT VASOCONSTRICTOR.
-:- SUBCELLULAR LOCATION: Secreted.
-:- TISSUE SPECIFICITY: BRAIN-SPECIFIC.
-:- SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE~99427933; PubMed=10499587; Ames R.S., Sarau H.M., Chambers J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-Spinal cord;
MEDLINE-99080095; PubMed-9861051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                    EMBL; AF104118; AAD13070.1; EMBL; AF140630; AAD55577.1; EMBL; Z98884; CAB63148.1; -..
                                                                                                                                                                                                                                                                                                                                                                              modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.lsb-sib.ch/announce, or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nature 401:282-286(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Human urotensin-II is a potent orphan receptor GPR14.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Douglas S.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                             PROSITE;
                                                                                                                                                                                                                                                              Pfam; PF02083;
                                                                                                                                                                                                                                                                                          MIM:
                                                                                                                                                                                                                                                                                                       Genew; HGNC:12636; UTS2
                                                                                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pearce A
                                                                                                                                                                                  PEPTIDE
                                                                                                                                                                                                PROPEP
                                                                                                                                                                                                                                                                            InterPro;
MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLFVLEENALRALEELERTALLQTLRQTV
                                                                                                                                                                                                                                                                                        604097
                                                                                                                                                                                                                                                                                                                                                                                           non-profit institutions as long as lts content ls in and this statement is not removed. Usage by and fin requires a license agreement.
                                                                                                                                                                                                                               Cleavage on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FROM N.A.
                                                                                                                                                                                                                                              PS00984;
                                                                                                                                                                                                                                                                          IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Acad. Sci. U.S.A. 95:15803-15808(1998)
                                              Conservative
                                                                                                        124 AA;
                                                                                                                                                     21
114
118
118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cord;
                                                                                                                                                                                                                                                              Urotensin_II;
                                                                                                                                                                                                                               UROTENS1N_II; 1.
on pair of basic residues;
                                                                                                                                                     110
124
123
19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chordata;
                                                                                                        27
14295
                                                                                                                                                                                                              n pair
                                                            44.6%;
                                                                                                           MΨ
                                              17;
                                                            Score 282.5;
Pred. No. 2.
                                                                                                        BY SIMILARITY.

MYKLASCCLLFIGEFLNPLL -> METNVFHLMLCVTSARTH

KSTSLCEGHFNSYP (IN REF. 2).

LDSR -> IHDLLL (IN REF. 2).

; C7A5FC7EFE00D312 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Craniata; Vertebrata; Euteleostoml; Catarrhinl; Hominidae; Homo.
                                                                                                                                                                                  UROTENSIN II
                                                                                                                                                                                                                 POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           vasoconstrictor and
                                               Mismatches
                                                             .3e-20;
                                                                             DB 1;
                                                 43;
                                                                                                                                                                                                                                 signal
                                                                           Length
                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           agonist for
                                                                              124;
                                                 ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      .
Σ.
                                                 Gaps
                    60
                                                                                                                                                                                                                                                                                                                                                                                                                                   50
                                                 Ņ
```

```
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UR2_RANRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                           Query Match
Best Local S
Matches 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Вр
                                                                     D1SULFID
SEQUENCE
                                                                                                    SIGNAL
PROPEP
                                                                                                                    Plam; PF02083; Urotensin_II; 1.
PROSITE; PS00984; UROTENSIN_II; 1.
Hormone; Cleavage on pair of basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UR2_RANRI STANDARD; PRT; 1
P33715; O9PSX6;
01-FEB-1994 (Rel. 28, Created)
16-OCT-2001 (Rel. 40, Last sequence up
16-OCT-2001 (Rel. 40, Last annotation
Urctensin II precursor (U-II) (UII).
                                                                                          PEPTIDE
                                                                                                                                                                PIR; PQ0445; PQ0445.
                                                                                                                                                                            EMBL; AF104117; AAD13069.1;
                                                                                                                                                                                             or send an email to license@isb-sib.ch).
                                                                                                                                                                                                           entities
                                                                                                                                                                                                                the European Bioinformatics Institute. There are no resuse by non-profit institutions as long as its content modified and this statement is not removed. Usage by a
                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EN
                                                                                                                                                                                                                                                                                                                 Conlon J.M., O'Harte F., Smith D.D., Tonon M.-C., Vaudry H "Isolation and primary structure of urotensin II from the tetrapod, the frog Rana ridibunda.", Biochem. Biophys. Res. Commun. 188:578-583(1992).
-!- FUNCTION: INVOLVED IN SMOOTH MUSCLE STIMULATING AND IOMOBILIZING ACTIVITIES. IT HAS A SUGGESTED ROLE AS A
                                                                                                                                                                                                                                                                                                                                                                                                                             Coulouarn Y., Lihrmann I., Jegou S., Anouar Y., Tostivint H. Beauvillain J.C., Conlon J.M., Bern H.A., Vaudry H.; "Cloning of the cDNA encoding the urotensin Il precursor in human reveals intense expression of the urotensin Il gene in motoneurons of the spinal cool.";
                                                                                                                                                   InterPro; IPR001483; Urotensin_11.
                                                                                                                                                                                                                                                                              -!- TISSUE SPECIFICITY: CENTRAL NERVOUS SYSTEM. SPINAL-!- SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=93075134; PubMed=1445302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rana ridibunda (Laughing frog) (Marsh frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea;
                                                                                                                                                                                                                                                                                                                                                                    Conlon J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE OF 115-127.
                                                                                                                                                                                                                                                                                                                                                                                                                            Proc. Natl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=99080095; PubMed=9861051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_Tax1D=8406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
MDRVPFCCLLFVGLLNPLLSFP--VTDTGEMSLQLPVLEENALRALEELERTALLQTLRQ 58
                                                                                                                                                                                                                                                                                                       CORTICOTROPIN-RELEASING FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WKYCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLARTRKQRKQHGTAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MYKLASCCLLFIGFLNPLLSLPLLDSRE1SFQLSAPHEDARLTPEELERASLLQILPEML
                                     Similarity
                                                                                                                                                                                                        requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   123
                                                                   115
121
127 /
                                                                                                                                                                                                                                                                                                                                                                                                                       Acad. Sci. U.S.A. 95:15803-15808(1998)
                           Conservative
                                                                    ΑĄ;
                                                                                       16
111
127
                                                                              126
                                                                   14732 MW;
                                   20.2%;
29.6%;
                                                                                                                     of basic residues;
                          20;
                                                                                                                                                                                                                                                                                                                IT HAS A SUGGESTED ROLE AS
                                   Score 128;
Pred. No. 1
                                                                                      UROTENSIN II
                                                                                                           POTENTIAL
                                                                 FC26BC90E00C082E CRC64;
                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        update)
                                                                                                                                                                                                                                                                                                                                                                  Tonon M.-C., Vaudry H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         127
                                                                                                                                                                                                  (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
             ມສ 1;
1.5e-05;
ອຣ 55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AΑ
                                                                                                                   Signal
                                            Length 127;
                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Euteleostomi;
Ranidae; Rana.
                                                                                                                                                                                                                                   restrictions
                                                                                                                                                                                                                                                                                                                Þ
                                                                                                                                                                                                                                                                                          CORD
                                                                                                                                                                                                                 and for
                                                                                                                                                                                                                                                                                                                         NOI
                                                                                                                                                                                                                                              EMBL outstation
                                                                                                                                                                                                                                                                                                                                                        brain
                                                                                                                                                                                                                                                                                                                                                                                                                                            'n
                       20;
                                                                                                                                                                                                                                                       a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                  frog
                     Gaps
                                                                                                                                                                                                                 commercia:
                                                                                                                                                                                                                                                                                                                                                        of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    119
                                                                                                                                                                                                                           no
                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                     5
                                                                                                                20
                              В
                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Дb
                                                                                                                                                                                                                                                                                                                      ÷
   66 GSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ഗ
                              9
```

```
Query Match
Best Local S
Matches 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UR2G_CYPCA
                                                                                                                                                                                                CHA1N
PEPTIDE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 114-125.

PROCEEDINGS OF THE 7th american peptide symposium, pp.69-72,

PIECCE Chemical Co., Rockford II. (1981).

-:- FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY

SYSTEM. IT HAS A SUGGESTED ROLE IN OSMOREGULATION AND AS A CORTICOTROPH-RELEASING FACTOR. THE NONHORMOLE PORTION OF THIS
                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboratic between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it use by non-profit institutions as long as its content is in no was modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JAN-1988
01-JAN-1988
                                                                                                                                                                                                                                                                            InterPro; IPR001483; Urotensin_I1.
Pfam; PF02083; Urotensin_II; 1.
PROSITE; PS00984; UROTENSIN_II; 1.
Hormone; Cleavage on pair of basic
                                                                                                                                                                                                                                                                                                                                                                                          entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                  EMBL; M14088; AAA49216.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=86307061; pubMed=2427672; obsako S., Ishida I., Ichikawa T., Obsako S. and sequence analysis of curotensin II-alpha and "gamma"; J. Neurosci. 6:2730-2735(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cyprinus carpio (Common carp).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniformes; Cyprinidae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UII gamma precursor [Contains: Urophysin
                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J. Neurosci.
[2]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    P06580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UR2G_
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           31-JAN-1988 (Rel. 06, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  113
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109
                                                      7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRECURSOR MAY BE A UROTENSIN BINDING PROTEIN, UROPHYSIN. SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
CSVLLLS-CSHLLAHPVTDTADMTYSGPDSVEEAGGVNPDDFSVSDLNEHLQRAAVAGYS
                                      CCLLFVGLLNPLLSFPVTDTGEMSLQLP-VLEENALRALEELERTALLQTLRQTVGTEAE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             KRAGNLSECFWKYCV 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CYPCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FVDKEAERD-----AED1FSKEGFGLDAYNMDDKEELFDKHPR1SLLSRLQSKDRKQFK 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TVGTEAEGSLGQADPSAETPTPRGSLRKALTGQDSN-----TVLSRLLARTRKQ-R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       KOHGTAPECFWKYCI
                                                                                                         Similarity
                                                                                                                                                                               125
                                                                                                                                                                                                  22
114
119
                                                                                          Conservative
                                                                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                  106
125
124
                                                                                                                                                                             13866
                                                                                                              16.9%;
27.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                             MW;
                                                                                          24;
                                                                                                            Score 107; DB 1; Length 125; Pred. No. 0.0015;
                                                                                                                                                                                                                   UROTENSIN
                                                                                                                                                                                                                                         UROPHYSIN
                                                                                                                                                                        E1587DCFC8CB674D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cDNAs encoding precursors
                                                                                                                                                                                                                                                                              residues; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deguchi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   125
                                                                                                                                                                                                                 I1-GAMMA
                                                                                                                                                                                                                                   GAMMA (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gamma; Urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Η.
                                                                                      60;
                                                                                      indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                a collaboration
                                                                                      2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          of.
                                                                                  Gaps
                                             65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 way
                                                                                  2;
```

:: :: ::

67

В

89

PLFSQENIKVPGQIPKEALRELLLEKPYRLIPPRGLWGSRRQFRKRGGGADCFWKYCI 125

```
SO TETER A REPORT OF THE PROPERTY OF THE PROPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UR2A_CYPCA
                                                 Ş
                                                                                                          DЬ
                                                                                                                                                              δÃ
                                                                                                                                                                                                                        DЬ
                                                                                                                                                                                                                                                                            80
g
                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        UR2A_CYPCA
P04560;
13-AUG-1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Eukaryota; Métazoa; Chordata; Craniata;
Actinopterygii; Neopterygii; Teleostei;
Cyprinidae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13-AUG-1987 (Rel. 05, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
UII alpha precursor (Contains: Urophysin alpha; Urotensin II-alpha).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a coilaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Cloning and sequence analysis of cDNAs encoding precursors urotensin II-alpha and -gamma.";
J. Neurosci. 6:2730-2735(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE=86307061; PubMed=2427672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cyprinus carpio (Common carp).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Munekata E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ohsako
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; M14084; AAA49215.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entities requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pierce Chemicai Co.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (In) Rich D.H., Gross E. (eds.); Proceedings of the 7th american peptide symposium,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 114-125.
Munekata E., Ohtaki T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro, IPR001483; UrOtensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         σ
122
                                                      120
                                                                                                             62
                                                                                                                                                                    60
                                                                                                                                                                                                                                                                                  14 LLNPLLSF----
                                                                                                                                                                                                                           N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRECURSOR MAY BE A UROTENSIN BINDING PROTEIN, UROPHYSIN SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CE Chémicai CO., ROCKFORD II. (1981).
FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY SYSTEM. IT HAS A SUGGESTED ROLE IN OSMOREGULATION AND AS A CORTICOTROPIN-RELEASING FACTOR. THE NONHORMONAL PORTION OF THIS
KYCV 125
                                                      KYCI 123
                                                                                                             AVVEYSPLLSRENIKVPGQIPKEALRELLLEKPYRLIPPSGLWGSRRQFRKRGGGADCFW
                                                                                                                                                                 VGTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFW 119
                                                                                                                                                                                                                           MCNLLLSFSVLLLSCTHLVAHPVTDTADMTYSGPDSVEEAGGVSPDDFAVSDLNDLLQRA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s.
                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             '02083; Urotensin_II; 1.
PS00984; UROTENSIN_II; 1.
Cleavage on pair of basic residues; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ishida I., Ichikawa T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                      125 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   22
114
119
                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      106
125
124
                                                                                                                                                                                                                                                                                                                                                                                                                                                         13840 MW;
                                                                                                                                                                                                                                                                                                                                                                     16.4%;
25.8%;
                                                                                                                                                                                                                                                                               ----PVTDTGEMSLQLP-VLEENALRALEELERTALLQTLRQT 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ichikawa T.,
                                                                                                                                                                                                                                                                                                                                           23;
                                                                                                                                                                                                                                                                                                                                                                     Score 104; DB 1; Length 125; Pred. No. 0.0028;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  UROTENSIN II-ALPHA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UROPHYSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         1FB6F86CA6B3A5AF CRC64;
                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Deguchi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           McMaster D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ALPHA (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Vertebrata; Euteleostomi;
Ostariophysi; Cypriniform
                                                                                                                                                                                                                                                                                                                                              55;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Lederis K.;
                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    pp.69-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ō,
                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                      121
                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                              2
```

RESULT 7 UR2_PLAFE

```
Вb
                                                                                                                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                                                                                                                   DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
    HELY_MYCTU
                                                                                                                                                                                                                                                                                                          RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                           HELY_MYCTU STAI
Q10701;
01-OCT-1996 (Rel.
01-OCT-1996 (Rel.
16-OCT-2001 (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 UR2_PLAFE
P21857;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Actinopterygii; Neopterygii; Teleostel; Euteleostei; Neoteleost
Acanthomorpha; Acanthopterygii; Percomorpha; Pleuronectiformes;
Pleuronectoidei; Pleuronectidae; Platichthys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Urotensin II precursor (U-II) (UII) (Fragments). Platichthys flesus (European flounder). Eukaryota; Metazoa; Chordata; Craniata; Vertebra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NON_CONS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Hormone;
NON_TER
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-1991
01-MAY-1991
MEDLINE=98295987; PubMed=9634230;
Cole S.T., Brosch R., Parkhill J., Garnier T., Churcher C., Harris Gordon S.V., Eiglmeier K., Gas S., Barry C.E. III, Tekala F., Badcock K., Basham D., Brown D., Chillingworth T., Connor R., Davies R., Devlin K., Feltwell T., Gentles S., Hamlin N., Holroyd Hornsby T., Jagels K., Krogh A., McLean J., Moule S., Murphy L., Oilver S., Osborne J., Quail M.A., Rajandream M.A., Rogers J., Rutter S., Seeger K., Skelton S., Squares S., Squares R.,
                                                                                                                                                                                                01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Probable helicase hely (EC 3.6.1.-).
HELY OR RV2092C OR MT2153 OR MTCY49.32C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE=Urophysis;
MEDLINE=90306357; PubMed=2365069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Post-translational processing of prepro-urotensin II.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conlon J.M., Arnold-Reed D.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=8260;
                                                                                                                                                                         Mycobacterium tuberculosis
Bacteria; Actinobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE;
                                                                                                           STRAIN-H37Rv;
                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              InterPro;
                                                                                                                                               NCBI_Tax1D=1773;
                                                                                                                                                              Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                             22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local
                                                                                                                                                                                                                                                                                                                                                 39
                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                          PVTDTGEMSLQLPV-LEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTP 80
                                                                                                                                                                                                                                                                                                                                                                         RG-----SLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                 RGAGLRYATLEVLLEKQSLLNPFSRVFG----IRKQFAGTTECFWKYCV
                                                                                                                                                                                                                                                                                                                                                                                                    PITESAEMPYPGPASLEERGVGSLDDL-------SLSEQN----YPPQ 38
                                                                                                                                                                                                                                                                                                                                                                                                                                                       30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; IPR001483; Urotensin_II.
PS00984; UROTENSIN_II; 1.
Cleavage on pair of basic residues.
1 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         83 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 18, Last sequence up (Rel. 40, Last annotation
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                              Corynebacterineae; Mycobacteriaceae; Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                >48
49
72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9292 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13.4%;
                                                                                                                                                                          Actinobacteria (class); Actinobacteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 0.1
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            6DD057577E6DF703 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UROTENSIN 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UROPHYSIN (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Balment R.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No. 0.11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                  906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 83;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AA.
                                                                                                                                                                                                                                                                                   AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                          ω
3
'
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                    83
                                                                                                                                                                                                                                                                                                                                                                                                                                                          34;
                                                                                   Harris D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                          5
```

```
RESULT 9
SYE_THETH
                                      Ş
                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                            Вb
                                                                                                                                                                                                                                                                                                                                                                                Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN=188 / ATCC 27634;

STRAIN=188 / ATCC 27634;

MEDLINE=92174899; PubMd=1541262;

MEDLINE=92174899; Name A., Kohno

""reki O., Suzuki K., Hara-Yokoyama M., Kohno

""reki O., Suzuki T., Morikawa K., Miyazawa T.
                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                               P27000;
01-AUG-1992
01-AUG-1992
16-OCT-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                       SITE
SEQUENCE
                                                                                                                                 Thermus thermophilus.
Bacteria: Thermus/Deinococcus
                                                                                                                        Thermaceae;
                                                                                                                                                                       (GluRS).
                                                                                                                                                                                                                                              SYE_THETH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a between the Swiss Institute of Bioinformatics and the EMBL the European Bioinformatics Institute. There are no restric use by non-profit institutions as long as its content is modified and this statement is not removed. Usage by and fentitles requires a license agreement (See http://www.isb-sibor send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN-CDC 1551 / Oshkosh;
Fleischmann R.D., Alland D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   weciphering the blology of Mycobacterium tuberculosis complete genome sequence.";
Nature 393:537-544(1998).
SEQUENCE TOTAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SMART;
                                                                                                                                                                                                                                                                                                          770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Submitted (APR-2001) to the EMBL/GenBank/DDBJ databases -!- SIMILARITY: BELONGS TO THE HELICASE FAMILY. SKI2 SU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peterson J., DeBoy R., Dodson R., Gwinn M.L., Ha. Kolonay J.F., Nelson W.C., Umayam L.A., Ermolaeva Delcher A., Utterback T., Weidman J., Khouri H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SMART;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR001410;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TubercuList;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TIGR; MT2153;
                                                                                                                                                                                                                                                                                                                                                           711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 laboratory strains.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Whole genome comparison
                                                                                                                                                                                                                                                                                                                                                                          11 FVGLL--NPLLSFPVTD---TGEMSLQLPVLEENALRALEELERTALLQTLR-----
                                                                                                                                                                                                                                                                                                                                 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BIND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   m; PF00270; DEAD; 1.
m; PF00271; helicase_C;
RT; SM00487; DEXDC; 1.
RT; SM00490; HELICC; 1.
                                                                                                                                                                                                                                                                                                   SAVVYETRGGDGQGAPFGADVPTPR--LRQAL----TQTSRLSTTLRADEQAHRITP
                                                                                                                                                                                                                                                                                                                          QTVGTEAEGSLGQADP-SAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAP
                                                                                                                                                                                                                                                                                                                                                  FVGLLTEREFIDGPATDPVVTDDGRLLARIYSESDLLVAECL-RTGAWEGLKPAELAGVV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Z73966; CAA98204.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AE007064; AAK46434.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
39; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      IPR001650;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Helicase; ATP-binding; 39 46 ATP
                                                                                                                                                                                                                                                                                                                                                                                                                                                       906 AA;
                                                                                                                                                                          (Rel. 23, Last sequence update)
(Rel. 40, Last annotation update)
NA synthetase (EC 6.1.1.17) (Glutamate--tRNA ligase)
                                                                                                                     Thermus.
                                                                                                                                                                                                                      (Rel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    132
                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rv2092c;
                                                                                                                                                                                                                                               STANDARD;
                                                                                                                                                                                                                   23, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                        99606 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                   12.9%;
32.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Helicase_C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DEAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        of Mycobacterium tuberculosis clinical and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          D.,
                                                                                                                                                                                                                                                                                                                                                                                                        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEVH
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 81.5; D
Pred. No. 4.2;
                                                                                                                                 group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eisen
                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     CC0A34A9495AE568 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     вох
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Complete
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        J.A.,
                                                                                                                               Deinococci;
                                                                                                                                                                                                                                            468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   moved. Usage by and for (See http://www.isb-sib
                                Kohno T.,
awa T., Yol
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             M.L., Haft
Ermolaeva M
                                                                                                                                                                                                                                            A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Carpenter L., White O., M.L., Haft D., Hickey E., Ermolaeva M.D., Salzberg ouri H., Gill J., Mikula
                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         proteome
                                                                                                                                                                                                                                                                                                                                                                                                      48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SKI2
                                                                                                                                                                                                                                                                                                                                                                                                                            Length 906;
                                             Matsuzawa
                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBFAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        is
for
                                                                                                                                                                                                                                                                                                                                                                                                     23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              n no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 S.L.,
                                                                                                                                                                                                                                                                                                                                                                            57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      on.
                                                                                                                                                                                                                                                                                                                                                                                                   7;
```

```
E2BD
AC
DT
DT
DT
DE
DE
OC
OC
OC
                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOUTH THE STATE OF THE STATE OF
                                                                                                                                                                                                                                                                                        RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Eukaryota; Metazoa; (Mammalia; Eutheria; 1) NCBI_TaxID=9986; [1]
                                                                                                                                                              P41111;
01-FEB-1995 (
01-NOV-1997 (
15-JUL-1999 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; X64557; CAA45854
PIR; S21172; S21172.
PIR; S21236; S21236.
PDB; 1GLN; 15-OCT-95.
                                                                                                 exchange factor)
EIF2B4 OR EIF2BD
                                                                                                                                                                                                                                                                        _RABIT
                                                                                                                        Translation init exchange factor)
                                                                              Oryctolagus
                                                                                                                                                                                                                                                E2BD_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR004527; Gltx_bact.
InterPro; IPR000924; Glu_trNa-synt_lc.
InterPro; IPR001412; tRNA-synt_I.
Pfam; PF00749; tRNA-synt_lc; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BINDING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TIGRFAMS; TIGR00464; gltx_bact; 1. PROSITE; PS00178; AA_TRNA_LIGASE_I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            modified and this statement is not removed entities requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    between the Swiss Institute of Bioinforms the European Bioinformatics Institute. The by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetase.";
Science 267:1958-1965(1995).
Science 267:1958-1965(1995).
-!- CATALYTIC ACTIVITY: ATP + L-glutamate
diphosphate + L-glutamyl-tRNA(Glu).
-!- SUBUNIT: MONOMER.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Aminoacyl-tRNA synthetase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR00987; TRNASYNTHGLU.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                or send an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cloning of the gi
protein.";
Eur. J. Biochem.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nureki O., Vassylyev D.G., Katayanagi K.,
Kigawa T., Miyazawa T., Yokoyama S., Moril
"Architectures of class-defining and spec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=HB8 / ATCC 27634;
MEDLINE=95215840; PubMed=7701318;
                                                                                                                                                                                                                                                                                                                                                                                                                                        377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               X-RAY CRYSTALLOGRAPHY (2.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Glutamyl-tRNA
                                                                                                                                                                                                                                                                                           10
                                                                                                                                                                                                                                                                                                                                                                                            74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 21 FPVTDTGEMSLQ--LPVLEE--NALRALEELERTALLQTLRQTVGTEAEG--SLGQ-ADP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: SIMILARITY: BELONGS TO
                                                                                                                                                                                                                                                                                                                                                                                   SAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQR
                                                                                                                                                                                                                                                                                                                                                                                                                         YPVSEKAORKLEEGLPLLKELYPRLRAQEEWTEAALEALLR---GFAAEKGVKLGOVAOP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SWISS-PROT entry is copyright. It is produced through a collaboration en the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                            5 (Rel. 31, Creacu., 77 (Rel. 35, Last seque 99 (Rel. 38, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         email to license@isb-sib.ch)
                                                    Cuniculus (Rabbit).
Metazoa; Chordata; Craniata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       243
246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CAA45854.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA,
                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                 LRAALTGSLETPGLFEILALLGKER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetase
gltX gene a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     204:465-472(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                18 "
247 "
246 A
53901 MW;
                                      Lagomorpha;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     12.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Cytoplasmic
                                                                                                                                       annotation
for eIF-2B (
                                                                                                                                                                                 sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLASS-I AMINOACYL-TRNA SYNTHETASE FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                from Thermus thermophilus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Protein biosynthesis; Ligase; ATP-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ANGSTROMS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 76;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "KMSKS"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           crystallization
                                                                                                                                                                                                                                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ced. No. 6.5;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BD8A141031BE06ED
                                   Leporidae;
                                                                                                                                                                                 update)
                                                                                                                                         n update)
delta sul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Morikawa
| specific
                                                                                                                                                                                                                                            523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (See http://www.isb-sib.ch/announce/
                                                    Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              There are no restrictions on ng as its content is in no
                                                                                                                                                                                                                                            Ã
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Shimizu
kawa K.;
                                                                                                                                       subunit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          +
                                   Oryctolagus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tRNA(Glu) =
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   domains
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                     (eIF:2B GDP-GTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               γď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         overproduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              HB8. Molecular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of glutamy1-tRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sekine S.-I.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
```

```
SOUR PROCESS OF THE P
TION AND DESCRIPTION OF THE PROPERTY OF THE PR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  QY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           _YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BIOCHIM. BIOPHYS. ACTA 1217:207-210(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Guanine nucleotide exchange factor for eukaryotic factor-2. Cloning of cDNA for the delta-subunit of initiation factor-2B.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A. STRAIN-New Zealand white; TISSUE-STRAIN-SEW Zealand white; TISSUE-STRAIN-94153999; PubMed-8110836;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Price N.T., Francia G., Hall L., Proud C.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saccharomyces cerevisiae (Baker's yeast)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence upd
15-JUN-2002 (Rel. 41, Last annotation u
Nucleoporin NUP1 (Nuclear pore protein
NUP1 OR YOR098C OR YOR3182C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUP1_YEAST
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR000649; IF-2B. pfam; PF01008; IF-2B; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; X75451; CAA53204.1; ALT_INIT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cntitles requires a license agreement (See http://www.isb-sib.ch/announce/
or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              pore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes; Saccharomycetales; Saccharomycetaceae; Saccharomyces.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Initiation
                                                                                                                                                           Voss H., Benes V., Andrade M.A., Valencia A., Rechmann Schwager C., Paces V., Sander C., Ansorge W.; Brom 'DNA sequencing and analysis of 130 kb from yeast chrom yeast 13:655-672(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE-90275616; PubMed-2190694;
Davis L.I., Fink G.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          101 LARTRKQ----RKQHGTAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          104
                                                                                                                                                                                                                                                                                                                      MEDLINE=97344368; PubMed=9200815;
                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  159 VRKSERQQVPTRKDYGSKVSLF 180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2-BOUND GDP FOR GTP.
SUBUNIT: COMPLEX OF FIVE DIFFERENT SUBUNITS; ALPHA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY: BELONGS TO THE EIF-2B ALPHA/BETA/DELTA SUBUNITS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DELTA AND EPSILON
                                   FUNCTION: ESSENTIAL COMPONENT OF NUCLEAR PORE COMPLEX. NUCLEOPORINS MAY BE INVOLVED IN BOTH BINDING AND TRANSLOCATION THE PROTEINS DURING NUCLEOCYTOPLASMIC TRANSPORT.
           SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RAKQEAER----ALKQARKGEQGGPPPQASPSTAGEAPAGGKRLTEHTQADDPTLLRRL 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTPRGSLR-KALTGQDSNTVLSRL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                              complex.";
61:965-978(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUP1 gene encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        factor; Protein biosynthesis.
523 AA; 57120 MW; 057895B1E9D25558 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                  N . A .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17, Last sequence update)
41, Last annotation update)
(Nuclear pore protein NUP1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11.8%;
32.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     an essential component of the yeast nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Liver
       Nuclear pore complex
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 75;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1076
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           There are no
                                                                                                                                                                                                           from yeast chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 523
9.3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EUKARYOTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Usage by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         initiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INITIATION FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         rabbit translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               restrictions
                                                                                                                                                                                                                                                                                          s.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BETA, GAMMA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10;
                                                                                                                                                                                                                                                                                          Teodoru
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for commercial
                                                                                                                                                                                                               ٧X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                           ဝှု
```

```
õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            а
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Š
RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                B_RICPR

RPOB_RICPR

STAN

52271; O9RH37;

15-DEC-1998 (Rel. 3

15-DEC-1998 (Rel. 3

16-OCT-2001 (Rel. 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nuclear protein; Transport; Repeat.
DOMAIN 333 949 29 X 9
SEQUENCE 1076 AA; 113581 MW; 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SGD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                      Andersson S.G.E., Zomorodipour A., Andersson J.O., Sicheritz-Ponten T., Alsmark U.C.M., Podowski R.M., Naeslund A.K., Eriksson A.-S., Winkler H.H., Kurland C.G.; "The genome sequence of Rickettsia prowazekii and the origin of
                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-Madrid E;
MEDLINE-98215179; PubMed-9555894;
Rachek L.I., Tucker A.M., Winkier H.H., Wood D.O.;
"Transformation of Rickettsia prowazekii to rifampin
J. Bacteriol. 180:2118-2124(1998).
                                                                                                                                                                                                                                                                          Rickettsiaceae;
NCBI_TaxID=782;
                                                                                                                                                                                                                                                                                                                        Rickettsia prowazekii
                                                                                                                                                                                                                                                                                                                                      beta chain) (RNA
RPOB OR RP140.
                                                                                                                                                                                                                                                                                                                                                                     DNA-directed RNA
                           mitochondria."
                                                                                                   MEDLINE=99039499; PubMed=9823893;
                                                                                                                                                                                                                                                                                                          Bacteria; Proteobacteria;
Nature 396:133-140(1998)
[3]
                                                                                                                        STRAIN-Madrid E;
                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        205
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OR OF NUP2 IS REQUIRED FOR GROWTH.

DOMAIN: CONTAINS F-X-F-G REPEATS.

SIMILARITY: TO THE CENTRAL REPEATING UNITS OF NSP1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN: APPEARS TO BE DIVIDED INTO THREE DOMAINS DEFINED CENTRALLY LOCATED REPEATING UNITS. FUNCTIONAL N-TERMINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TO MAMMALIAN P62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A35622; A35622.
S0005624; NUPl.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GQADP-----SAETPTP--RGSLRKAL---TGQDSNTVLSRLLA-RTRKQRKQ-HGTAP 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GTVW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ECFW 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SKSDEGGSYLCTSSTPSPIKNGSCTRQLAGKSGEDTNVGLPILKSLKNRSNRKRFHSQSK 204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PIIIYGTENTERPPL-LPILPIQRLRLLREKQRVRNMRELGLIQSTEFPSITSSVILGSQ 144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         M33632; AAA34822.1;
X94335; CAA64020.1;
Z75006; CAA99295.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                           Rickettsieae; Rickettsia
                                                                                                                                                                                                                                                                                                                                                  . 37. Created)
. 37. Last sequence update)
. 40. Last annotation update)
polymerase beta chain (EC 2.7.7.6) (Transcriptase polymerase beta subunit).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11.78; 26.68;
                                                                                                                                                                                                                                                                                                          aipha subdivision; Rickettsiales
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 74;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4 9 AA APPROXIMATE REPEATS
4AC23567D2FB53CC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 1374
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 1076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                     resistance.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUP2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AB AB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -GSL 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUP1
```

7;

```
EAD DT DT DT DT DT OC OC
                                                                                                                                                                                                                                                                DЪ
                                                                                                                                                               Qy
                                                                                                                                                                                   В
                                                                                                                                                                                                     Qy
                                                                                                                 RESULT
                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                       _EBV
                            EAD_EBV
STAND.....
P03191;
21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
01-DEC-1992 (Rel. 24, Last annotation update)
01-DEC-1992 (Rel. 24 (EA-D))
                                                                                                                                                                                                                                                               VARIANT
SEQUENCE
      Gammaherpesvirinae;
         Epstein-barr virus (strain B95-8) (Human herpesvirus 4).
Viruses; dsDNA viruses, no RNA stage; Herpesviridae;
                                                                                                                                                                                                                                                                                                     VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                                                           VARIANT
VARIANT
                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00562; RNA_pol_B; 1.
PROSITE; PS01166; RNA_POL_BETA;
Transferase; DNA-directed RNA po
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This
                                                                                                                                                                                                                                                                                   VARIANT
                                                                                                                                                                                                                                                                                                                                                                       VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF034531; AAC38354.1; -.
EMBL; AJ235270; CAA14608.1; -.
EMBL; AF076437; AFC2439.1; -.
HSSP; Q9KWU7; 1HQM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             modified and this statement is not removed. Usage by ar entities requires a license agreement (See http://www.ish-
                                                                                                                                             918
                                                                                                                                                                                   866
                                                                                                                                                                                                                                                                                             VARIANT
                                                                                                                                                                                                                                                                                                                         VARIANT
                                                                                                                                                                                                                                                                                                                                                               VARIANI
                                                                                                                                                                                                                                                                                                                                                                                          Antibiotic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the
                                                                                                                                                                                                                                                                                                                                   VARIANT
                                                                                                                                                                                                                                                                                                                                                                                  VARIANT
                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; IPR001572; RNA_pol_B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Drancourt M., Raoult D.;
"Characterization of mutations in the rpoB gene in naturally rifampin-resistant Rickettsia species.";
Antimicrob. Agents Chemother. 43:2400-2403(1999).
                                                                                                                 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- CATALYTIC ACTIVITY: N nucleoside triphosphate = N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=99437773; PubMed=10508014;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A. STRAIN-Breinl;
                                                                                                                                                                84
                                                                                                                                                                                                       28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (RNA)(N).
SUBUNIT: THE ENZYME CONSISTS OF SUBUNIT: THE ENZYME CONSISTS OF 2 AI
                                                                                                                                     LLRAIFGEKAFDVKDSSLHVPSGVSGTVVEVRIFSRRGVEKDQRAIAIE
                                                                                                                                                        LRKALTGQD-----SNTVLS-RLLARTRKQRKQHGTAPE 116
                                                                                                                                                                                             EMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGS---LGQADPSAETP-TPRGS 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BETA' CHAIN.
SIMILARITY: BELONGS TO THE RNA POLYMERASE BETA CHAIN FAMILY
                                                                                                                                                                           EITRDIPNVSEEALRHLDEV---GIIY-----VGAEVKAGDILVGKVTPKSESPITPEEK 917
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OF DNA INTO RNA USING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBSTRATES
                                                                                                                                                                                                                                 Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     non-profit
                                                                                                                                                                                                                                                              10
15
19
96
195
216
256
273
282
282
299
310
                                                                                                                                                                                                                                                                                                                                                                                          resistance;
                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DNA-DEPENDENT RNA POLYMERASE CATALYZES THE TRANSCRIPTION
                                                                                                                                                                                                                                                              AA,
                                                                                                                                                                                                                                                                               10
15
19
195
195
216
226
273
273
282
299
    Lymphocryptovirus
                                                                                                                                                                                                                                11.5%;
25.7%;
                                                                                                                                                                                                                                                            154582 MW;
                                                                                                                                                                                                                                                                                                                                                                                     Complete proteomo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  THE FOUR RIBONUCLEOSIDE TRIPHOSPHATES
                                                                                                                                                                                                                       21;
                                                                                                                                                                                                                                                                     M (IN )

M (IN )
                                                                                                                                                                                                                               Score 73;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                               -> A (IN
                                                                                                                                                                                                                                                                -> L (IN STRAIN BREINL).
-> L (IN STRAIN BREINL).
-> E (IN STRAIN BREINL).
-> I (IN STRAIN BREINL).
-> R (IN STRAIN BREINL).
-> P (IN STRAIN BREINL).
-> Y (IN STRAIN BREINL).
-> N (IN STRAIN BREINL).
-> N (IN STRAIN BREINL).
-> K (IN STRAIN BREINL).
                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                           384676DFF6584DB4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALPHA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                               DB
45;
                                                                                                                                                                                                                                                                                                                                                                               STRAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIGMA CHAIN AND THE CORE CHAINS, 1 BETA CHAIN, AN
                                                                                                                                                                                                                                                                                                                                                                                               Transcription;
                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                     32;
                                                                                                                                                                                                                                      Length 1374;
                                                                                                                                                                                                                                                                                                                                                                             BREINL).
                                                                                                                                                                                                                    Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 diphosphate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and for
                                                                                                                                                                                                                    28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'n
                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 no
                                                                                                                                                                                                                  6
밁
                                                                                                                                                              δÃ
                                                                                                                                                                                   Вb
                                                                                                                                                                                                     Qy
                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                           20
```

```
POB1_YEAST
                                                                                                                                                                                                                                                                                  RESULT 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
DNA POLYMOLIO PROTEIN CHL15).
replication protein CHL15).
POB1 OR CTF4 OR CHL15 OR YPR135W OR P9659.7.
Saccharomyces cerevisiae (Baker's yeast).
Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomyceta; Saccharomycetaceae; Saccharomyces
                                                                                                           POB1_YEAST STANDARD: PRT; 926 AA. Q01454; 01-JUL-1993 (Rel. 26, Created) 01-JUL-1993 (Rel. 26, Last sequence update) 15-JUN-2002 (Rel. 41, Last annotation update) DNA polymerase alpha chinding protein (POB1/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; V01555; CAA24844.1; -. EMBL; M17322; AAA45877.1; -. PIR; A03754; QQBE13. PIR; S32998; S32998.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cho M.-S., Milman G., Hayward S.D.;
"A second Epstein-Barr virus early antigen gene encodes a 48- to 50-kilodalton nuclear protein.
J. Virol. 56:860-866(1985).
-i- FUNCTION: TRANS-ACTIVATOR FOR LYTIC CYCLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Early protein; Transcription regulation; Activator; DNA-binding; Noclear protein; Antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   between the Swiss institute. There are no restractions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial modified and this attement is not removed. Usage by and for commercial modified and this attement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                         378 ARKRTSSEARQKQKHPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 123-404 FROM N.A.
MEDLINE=87284177; PubMed=2441081;
Pfitzner A.J., Strominger J.L., Speck S.H.;
"Characterization of a cDNA clone corresponding to
                                                                                                                                                                                                                                                                                                                                                                                                                                   318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=86062917;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the Epstein-Barr virus BamHI M fragment: evidence
mRNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gibson T.J., Hatfull G., Huds
Tuffnell P.S., Barrell B.G.,
"DNA sequence and expression
Nature 310:207-211(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baer R., Bankier A.T., Biggin M.D., De
Gibson T.J., Hatfull G., Hudson G.S.,
                                                                                                                                                                                                                                                                                                                                                                                         103 ---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       258
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    J. Virol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=84270667; PubMed=6087149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=10377;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 PLLSFPV------TDTGEMSLQLPVL-----EENALRALEELE-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DENTIFICATION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Nuclear.
                                                                                                                                                                                                                                                                                                                                                                                                                    QPLGTGLQQRPRHTVSPSPSPPPPPRTPTWESPARPETPSPAIPSHSSNTALERPLAVQL
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ---RTALLQTLRQTVGTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLA---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PAVSVPILRFYRSGIIAVVAGLLTSAGDLPLDLSVILFNHASEEAAASTASEPEDKSPRV
                                                                                                                                                                                                                                                                                                                                                                                   RTRKQRKQHGTAPE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61:2943-2946(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Antigen.
A; 43373 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=2999442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.5%;
                                                                                                                                                                                                                                                                                                                                                                                     116
                                                                                                                                                                                                                                                                                                                                         394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 72.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   533B5D5ECC05F960 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               the
                                                                                                                    n update)
1 (POB1/CTF4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Deininger P.L., ra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В95-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Epstein-Barr virus genome.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1;
                              Saccharomycetes
                                                                                                                protein) (Chromosome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ë
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     o a transcript for overlappin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                BamHI fragment
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Farrell P.J., ., Seguin C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   overlapping
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.
```

```
RA Bussey H., Storms R.K., Ahmed A., Albermann K., Allen E., Ansorge W., RA Araujo R., Aparicio A., Barrell B.G., Badcock K., Benes V., RA Chung E., Churcher C.M., Coster F., Davis K., Davis R.W., Aparicih F.S., Delius H., Dipaolo T., Dubois E., Duesterhoeft A., RA Dietrich F.S., Delius H., Dipaolo T., Dubois E., Duesterhoeft A., RA Hall J., Hebling U., Heumann K., Hilbert H., Hillier L., Ra Hall J., Hebling U., Heumann K., Hilbert H., Hillier L., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Kleine K., Ra Hunicke-Smith S., Hyman R., Johnston M., Kalman S., Fettelin H., Wang H., Walsh S.V., Vissers S., Voss H., Walsh S.V., Wambutt R., Wang Y., Wedler E., Wedler H., Winnett E., Ra Ling M.W., Zollner A., Vo D.H., Hani J.;

"The nucleotide sequence of Saccharomyces cerevisiae chromosome XVI.";

Nature 387:103-105(197).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kouprina N.Y., Kroll E.S., Bannikov V.M., Bliskovsky V.V., Gizatuliin R.Z., Kirillov A.V., Shestopalov B.V., Zakharye Hieter P., Spencer F., Larionov V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Miles J., Formosa f.; "Evidence that POBL, a Saccharomyces cerevisiae protein that binds "Evidence that POBL, a Saccharomyces cerevisiae protein that binds DNA polymerase alpha, acts in DNA metabolism in vivo."; Mol. Cell. Biol. 12:5724-5735(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIINE=93302761; PubMed=8316240; Kouprina N.Y., Kroll E.S., Koryabin M.Y., Shestopalov B.V., Kouprina N.Y., Bliskovsky V.V., Bannikov V.M., Gizatullin R.Z., Kirillov A.V., Bliskovsky V.V., Bannikov V.M., Gizatullin R.Z., Kirillov A.V., Kravtsov V.Y., Zakharyev V.M.; Kravtsov V.Y., Zakharyev V.M.; Thills -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes are the controlling than the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS") ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS") ("CHLIS -- a new gene controlling the replication of chromosomes ("CHLIS") ("
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gizatullin R
Larionov V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=93078774; PubMed=1448101.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=4932
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Saccharomyces cerevisiae."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=S288c / AB972;
MEDLINE=97313271; PubMed=9169875;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                sequence analysis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Saccharomycetes yeast: cloning, physical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Kouprina N.Y.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "CTF4 (CHL15) mutants exhibit defective DNA metabolism in the yeast
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-93078775; PubMed-1341195
                       PIR;
                                                                            EMBL; M94769; AAA34887.1; -. EMBL; S63246; AAB27308.1; -. EMBL; U40829; AAB68276.1; -.
                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A
                                                                                                                                                                                               entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                             mod1fied
                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                    European Bioinformatics Institute The by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: ACCESSORY FACTOR FOR DNA REPLICATION. ACCURATELY DUPLICATING THE GENOME IN VIVO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bloi.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ce11.
  A45040;
                                                       S27446;
                                                                                                                                                                                                                                                             and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biol. 13:7202-7202(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R.Z.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Biol. 12:5736-5747(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (Mosk) 27:569-588(1993).
  A45039
A45040
                                                          S27446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kroll E.S.,
., Kirillov /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AND SEQUENCE OF 1-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bannikov V.M., Bliskovsky V.V., A.V., Zakharyev V.M., Hieter P., Spencer F.,
                                                                                                                                                                                                                                                                                                                       There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 mapping,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cerevisiae chromosome XVI.";
                                                                                                                                                                                                                                                                                             as its content
                                                                                                                                                                                                                                                               Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zakharyev V.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 sequencing, and
                                                                                                                                                                                                                                                                  bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ΙŢ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PLAY A
                                                                                                                                                                                                                                                                     and
                                                                                                                                                                                                                                                                     for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ROLE
                                                                                                                                                                                                                                                                                                   11
                                                                                                                                                                                                                                                                     n no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ï
                                                                                                                                                                                                                                                                                                                                9
```

```
RESULT 15
HELY_MYCLE
ID HELY_M
AC Q9ZBD8
AC Q9ZBD8
DT 16-OCT
DR MUTPHY
RA Wheele
RA Holloy
RA WITH
CC ----
THIS CC
THIS CC
THIS CC
THIS CC
THE EMBL;
DR EMBL;
DR EMBL;
DR InterI
DR InterI
DR InterI
DR InterI
DR InterI
DR INTERI
DR SMART
KW Hydro
FT SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DNA replication INIT_MET 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cole S.T., Eiglmeier K., Parkhill J., James K.D., Thomson N.R., wheeler P.R., Honore N., Garnier T., Churcher C., Harris D., Mungall K., Basham D., Brown D., Chillingworth T., Connor R., Davies R.M., Devlin K., Duthoy S., Feltwell T., Fraser A., Hamlin N., Holroyd S., Hornsby T., Jagels K., Lacroix C., Maclean J., Moule S., Murphy L., Oliver K., Quail M.A., Rajandream M.A., Rutherford K.M., Ruther S., Seeger K., Simon S., Simmonds M., Skelton J., Squares R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16-OCT-2001 (Rel. 40, Last sequence up 16-OCT-2001 (Rel. 40, Last annotation Probable helicase hely (EC 3.6.1.-). HELY OR MIL1333 OR MICB2533.29.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q9ZBD8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HELY_MYCLE
                                                                                                                                                                                                                             use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=21128732; PubMed=11234002;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Actinomycetales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Bacteria; Actinobacteria; Actinobacteria (class); Actinobacteridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mycobacterium leprae
                                                                                                                                                                                                                                                                                                                                                                                     "Massive gene decay in the leprosy bacillus."; Nature 409\!:\!1007\!-\!1011(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                         Squares S., S
Barrell B.G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NCBI_TaxID=1769;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           765 FPLPLPSEMEIRMPVFVKSKL-----LEENKAILNKKNEIGADTEAEEGEEDKEIQIPVS 819
                                                                                                                                                                           EMBL; AL035310; CAA22943.1; EMBL; AL583921; CAC31714.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       820 MAAEEEYLRSK----VLSELLTDT
                                                                                                                                                                                                                                                                                                                                                                       -i- SIMILARITY: BELONGS TO THE HELICASE FAMILY. SKI2 SUBFAMILY.
                                                                                                                                         InterPro;
                                                                                                                                                        Leproma; ML1333;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21 FPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            S0006339; CTF4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RGSLRKALTGQDSNTVLSRLLART
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Similarity
                                                                                                                                           IPR001410; DEAD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      926 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0
111
587
589
600
834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                             Stevens K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STANDARD;
                                                                                                                                                                                                 CAA22943.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Corynebacterineae; Mycobacteriaceae; Mycobacterium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               40, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1111
587
589
600
834
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        104293
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                         imon S., Simmonds M., Skelton J.,
Taylor K., Whitehead S., Woodward
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          X
X
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              < < 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            839
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          · · ·
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        39CBE2E90931CAC2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (IN REF.
(IN REF.
(IN REF.
(IN REF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      920
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 926;
                                                                                                                                                                                                                                                                                                                                                                                                                                           Iton J., Squares R., Woodward J.R.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        9:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
```

Pfam; PF00270; DEAD; 1.
Pfam; PF00271; helicase_C; 1.
SMART; SM00487; DEXDC; 1.
SMART; SM00490; HELICC; 1.
SMART; SM00490; HELICC; 1.
Hydrolase; Helicase; ATP-binding; Complete proteome.
Hydrolase; 19
46
ATP (POTENTIAL).

InterPro;

IPR001650;

Helicase_C

NP_BIND

DEVH BOX

GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.

3/1

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                  Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                        243.5
234
163.5
85.5
                                                                                                                                                                        Score
                                                              80.5
77.5
77.5
77.7
       76.5
75.5
75
75
74.5
74.5
                                                                                                                81
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    protein search, using sw model
                                                                                                                                                                        Match Length
                                                                                                                                                                                                                                                                4:
6:
7:
7:
10:
110:
113:
114:
115:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US-09-831-907A-30.
                                                                                                                                                                                  Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       671580 seqs, 206047115 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 MDRVPFCCLLFVGLLNPLLS.....TRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          March 10, 2003, 17:35:28; Search time 23.6027 Seconds (without alignments) 1073.767 Million cell updates/sec
       38.5
37.0
37.0
13.5
112.7
112.2
112.2
112.2
112.2
112.2
112.2
112.2
112.2
112.2
112.2
112.3
111.8
                                                                                                                                                                                                                                                                                                                                                                                                                                SPTREMBL_21:*
                                                                                                                                                                                                                                                                                                                                                                                                                      sp_archea:*
                                                                                                                                                                                                                                                                                                                                           sp_phage:*
                                                                                                                                                                                                                                                                                                                                                   sp_organelle:*
                                                                                                                                                                                                                                                                                                                                                             sp_mhc:*
                                                                                                                                                                                                                                                                                                                                                                       sp_mamma1:*
                                                                                                                                                                                                                                                                                                                                                                                 sp_invertebrate:*
                                                                                                                                                                                                                                                                                                                                                                                            sp_human:*
                                                                                                                                                                                                                                                                                                                                                                                                    sp_fungi: *
                                                                                                                                                                                                                                                                                                                                                                                                            sp_bacteria:*
                                                                                                                                                                                                                                                                       sp_unclassified:*
sp_rvirus:*
sp_bacteriap:*
                                                                                                                                                                                                                                                               sp_archeap:*
                                                                                                                                                                                                                                                                                                     sp_vertebrate:*
                                                                                                                                                                                                                                                                                                               sp_virus:*
                                                                                                                                                                                                                                                                                                                        sp_rodent:*
                                                                                                                                                                                                                                                                                                                                sp_plant:*
                         121
139
85
783
7783
470
7783
323
323
323
323
323
272
478
                         1
0
0
0
0
0
0
0
                                                                                                                                                                        DΒ
                                                                                                              0.400
    095J46
095K72
095K72
092B19
09W249
09W275
09WWY5
09WWY5
0044090
0944090
09WMK5
09WMK5
09B0153
09B0153
09ABX8
09BX8
                                                                                                                                                                        10
                                                                                                                                                                                                    SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      671580
044090 drosophila

Q9vm02 drosophila

Q9pnpi6 homo sapien

Q8vmk5 pseudomonas

Q9bg19 homo sapien

000153 homo sapien

Q9a8x8 caulobacter

Q9pez6 xylella fas
                                                                            Q9w249 drosophila
Q8y705 listeria mo
Q9wwy5 pseudomonas
Q9rxg0 deinococcus
                                                                                                                 Q95j46 sus scrofa
Q8tau6 homo sapien
Q95k72 sus scrofa
Q92bi9 listcria in
                                                                                                                                                                    Description
```

43 44 45	38 39 41	35 37	32	25 27 28 28	17 18 19 20 21 21 23
71 71 71	71 71 71	71.5 71.5 71.5 71.5	72 72 72 71.5	. 73 73 73	74 74 74 73.5 73.5 73.5
11.2 11.2 11.2 11.2	11.2 11.2 11.2	11.3	11.4 11.4 11.4		11.7 11.7 11.7 11.6 11.6 11.5
535 570 574 602	331 426 455	404 886 939	240 274 1289 2517 297	538 823 920 2362	270 517 2399 297 1144 478 478
11 16 11	16 3 10	16 16 16	15 2 10 16	5 1 1 6 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	2 11 16 5 11
Q9EQT7 Q8ZP20 Q9BLT0 Q91YD3	Q8RE13 Q8TFH7 Q9SQT6 Q920L8	Q9KQB4 Q9SLN1 Q9X1V4 Q9X1V4	Q9F0V5 Q8RVE3 Q9F0G7 Q9W060	Q9VIR6 P74862 Q8Z6K9 Q8ZPP5 Q9NGR9	Q9AME5 Q99K04 Q8U9P4 Q8U9P9 035929 P91389 P91389 Q8VDL2 Q8R5L2
mus sal leis mus	Q8rel3 fusobacter Q8rel3 fusobacter Q8tfh7 schizosacch Q9sqt6 arabidopsis Q92018 mus musculu		azoarcus sp oryza sati rickettsia drosophila	droso salmo 9 salo 5 salo droso	Q9ame5 desulfovibr Q99k04 mus musculu Q8u9p4 agrobacteri Q35929 mus musculu P91389 caenorhabdi Q8vd12 mus musculu Q8r512 mus musculu

ALIGNMENTS

Qu Be Ma	SQ	Z PR	DR	DR S	R R	RT	RT	RA	RA	RA	RX	RC	RΡ	RN	RL	RΑ	RC	RP	RN	ò	8	င္ပ	SO	DE	DT	ΡŢ	DT	AC	ID	Q95J46	RESULT
Query Match 38.5%; Score 243.5; DB 6; Length 121; Best Local Similarity 45.7%; Pred. No. 1.1e-15; Best Local Similarity 45.7%; Pred. No. 1.1e-15; Matches 53; Conservative 15; Mismatches 47; Indels 1; Gaps 1;	FRUSITE; PSUU984; UROTENSIN II; UNKNOWN 1. SEQUENCE 121 AA; 13580 MW; 656E4B01AF69101B CRC64;	02083; Urotensin_I1; 1.	InterPro; IPR001483; Urotensin_II.	EMBL; AB063244; BAB60887.1;	Biochem. Biophys. Res. Commun. 265:123-129(1999).		"Urotensin II is the endogenous ligand of a G-protein-coupled orphan	Fujino M.;	(urokawa T	a v Kurihara w	MEDLINE=20017983; PubMed=10548501;	TISSUE=SPINAL CORD:	SEQUENCE FROM N.A.		Submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases	Sugo T., Mori M.;	TISSUE=SPINAL CORD;	SEQUENCE FROM N.A.				Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Futeleostom;		script vari	(TrEMBLrel.	(TrEMBLrel, 19)	01-DEC-2001 (TrEMBLrel. 19, Created)		Q95J46 PRELIMINARY; PRT; 121 AA.	J46	ULT 1

Qy

```
RESULT
RE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
Q95K72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
"Urotensin II 10 ...;
receptor, SENR (GPRI4).";
Biochem. Biophys. Res. Commun. 265:123-129(1999).
EMBL; AB063246; BAB60889.1; ...
Interpro; IPR001483; Urotensin_II; 1.
Pfam; PF02083; Urotensin_II; 1.
Pfam; PF02084; UROTENSIN_II; UKNOWN_1.
PROSITE; PS00984; UROTENSIN_II; UKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Strausberg R.;
Strausberg R.;
Strausberg R.;
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases SEMBL; BC025776; AAH25776.1; - 32DC529936D5BDB6 CRC64; SEOUENCE 139 AA; 16276 MW; 32DC529936D5BDB6 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammaiia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Oi-DEC-2001 (TrEMBLrei. 19, Last s
Oi-MAR-2002 (TrEMBLrei. 20, Last a
Urotensin II transcript variant 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, 01-JUN-2002 (TrEMBLrel. 21, Similar to urotensin 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q8TAU6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Q8TAU6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q95K72;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q95K72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
                                                                                                                                                                                                                                                           TISSUE-SPINAL CORD;
MEDLINE-20017983; PubMed-10548501;
MORI M., Sugo T., Abe M., Shimomura Y., Kurihar
Kikuchi K., Shintani Y., Kurokawa T., Onda H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9823;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sugo
                                                                                                                                                                                                                                         Fujino M.;
                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                            Submitted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-SPINAL CORD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLLLLGCLGLLFALPVPDSRKEPLPFSA-PEDVRSAWDELERASLLQMLPETPGAEAGED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKQRRK 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARUTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LREADAGMDIFYPRGEMRKAFSGODPNIFLSHLLARIKKPYKKRGPPSECFWKYCV 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GTEAEGSLGQADPSAETPTPRGSLRK--ALTGQDSNTVLSRLLART----RKQRKQ i10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          l Similarity
55; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mori M.;
                                                                                                                                                                                                                                                                                                                                                                                                                         (JUN-2001) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrel. (TrEMBLrei.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19,
19,
20,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 234; DB 4
Pred. No. le-14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Craniata; Vertebrata; I Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          <u>139</u>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   85
                                                                                                                                                                                                                                                                                         Kurihara M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 4; Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   update)
                                                                                                                                                                                                              G-protein-coupled
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             38;
                                                                                                                                                                                                                                                                   Nishimura
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Euteleostomi;
                                                                                                                                                                                                                                                                                            Kitada C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             <u>ب</u>
```

```
RESULT 4
092BI9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     γ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        δ
RESULT 5
09W249
                                                                                                                                                                                                                    믕
                                                                                                           В
                                                       밁
                                                                              Š
                                                                                                                                 Ş
                                                                                                                                                               Query Match
Best Local S
Matches 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q92BI9;
01-DEC-2001
01-DEC-2001
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                Glaser P., Frangeul L., Buchrieser C., Rusniok C., Amend A.,
Baguero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Charbit A., Chetouani F., Couve E., de Daruvar A., Dehoux P.,
Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,
Gautier L., Goebel W., Gomez Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kuhn M., Kunst F., Kurapkat G.,
Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
Nordsiek G., Novelia S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Remmel B., Rose M., Schlueter T., Simoes N., Tierrez A.,
Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.;
"Comparative genomics of Listeria species.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacteria; Firmicutes; Bacilius/Clostridium Listeriaceae; Listeria.
                                                                                                                                                                                                                   TIGRFAMS; TIGR00644; recJ; 1. Hypothetical protein; Complete SEQUENCE 783 AA; 87598 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. STRAIN-CLIP 11262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q92BI9
                                                                                                                                                                                                                                                                                                                                          Science 294:849-852(2001).
EMBL; AL596169; CAC96791.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=1642;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Listeria innocua.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Hypothetical protein LIN1560.
                                                                                                                                                                                                                                                             Pfam;
                                                                                                                                                                                                                                                                        Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PubMed=11679669;
                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                  InterPro;
                                                                                                                                                                                                                                                                                                                 InterPro;
                                                                                                                                                                                                                                                                                                                            ListiList; LIN01560;
                                                                                                           221
                                                       279
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      89
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
nes 37; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33 ---SDAGMDIFYPRGEMRKAFSGQDPNIFLSHLLARIKKPYKKRGPPSECFWKYCV
                                                                                62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  7
                                                                                                                                      9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGS 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LGQADPSAETPTPRGSLRKALTGODSNTVLSRLLARTRKORKQHGTAPECFWKYCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CLLLLGCLGLLFALPVPDSRKEPLPF-------
                                                                                                                                    LLFYGLLNPLLSFPYTDTGEMSLQLPY--LEENALRALEELERTALL---QTLRQTYG--
                                                     LAPRINAVGRIGPADPAADLILTEDPEEALFLAEEIDDAN
                                                                                ----TEAEGSLGQADPSAE---TPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQ 110
                                                                                                          LVAVGTVADLVS--LTDENRLLVQLGLRQLRENANLGLAVLAKKASLKLEEATEETIGFG
                                                                                                                                                                                                                                                        Pro; IPR004610; RecJ. PF01368; DHH; 1. PF02272; DHHA1; 1.
                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                  IPR003156; DHHA1.
IPR001667; Ppesterase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (TrEMBLrei.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEROVAR 6A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rei. 19, C.
rel. 19, La
rel. 21, La
n lin1560.
                                                                                                                                                                            13.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11;
                                                                                                                                                                16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 163.5; DB (
Pred. No. 2.8e-08
                                                                                                                                                                            Score 85.5; D
Pred. No. 9.7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                                   proteome.
EC04A20500A6B8AB CRC64;
                                                                                                                                                               Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             783
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ą
                                                                                                                                                                                          DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DB 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 group; Bacillales;
                                                                                                                                                                 36;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     , Amend A.,
-horty T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                 Indeis
                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37;
                                                                                                                                                                 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                        323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    32
                                                                                                                                       61
                                                                                                              278
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ۲,
                                                                                                                                                                   6,
```

PA ID

Q9W249; O9W249; O1-MAY-2000

PRELIMINARY; (TrEMBLrel. 13,

Created)

PRT;

470 AA

ભ

```
Qy
                                                                                    DЬ
                                                                                                                    δÃ
                                                                                                                                                                                                                               밁
                                                                                                                                                                                                                                                                   RA Addams N.D., Cetniker S.E., Holt R.A., Evans C.A., Gocayne J.D.,
RA Adams N.D., Cetniker S.E., Lip P.M., Hoskins R.A., Galle R.F.,
RA George R.A., Lewis S.E., Ekchards S., Asbburner M., Honderson S.N.,
RA Brandon R.C., Bogers Y. H.C., Blazej R.G., Champ Q., Chen L.X.,
RA Man K.H., Doyle C., Baxter E.G., Helt G., Melson C.R., Miklos G.L.G.,
RA Abril J.E., Agbayani A., An H.-J., Andrews-Pfannkoch C., Baldwin D.,
RA Bellew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M.,
RA Beson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S.,
RA Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottker P.,
RA Cherry J.M., Cavley S., Dahlke C., Davenport L.B., Davies P.,
RA Bordson K.J., Bronder M., Butler H., Cadieu E., Center A., Chandra I.,
RA Cherry J.M., Cavley S., Dahlke C., Davenport L.B., Davies P.,
RA Bortson D., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
RA Durbin K.J., Evangelista C.C., Ferraz C. Ferriera S., Pleischmann W.,
RA Cherry J.M., Cavley S., Dahlke C., Davenport L.B., Davies P.,
RA Durbin K.J., Evangelista C.C., Ferraz C., Gelbart M.M., Glasser K.,
RA Glodek A., Gong F., Gorrell J.H., Gu Z., Genbar M.M., Glasser K.,
RA Hostin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J.,
RA Hostin D., Houston K.A., Howland T.J., Mel M.-H., Ibbayann C.,
RA Hostin D., Houston K.A., Howland T.J., Mel M.-H., Debyann C.,
RA Merkulov G., Milahina N.V., Mobarry C., Morris J., Woshrefi A.,
RA Merkulov G., Milahina N.V., Mobarry C., Morris J., Woshrefi A.,
RA Melson D.R., Nelson K.A., NIXON K., NIXON M., Stupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stepleton M., Stupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Stupski M.P., Smith T.,
RA Spier E., Spradling A.C., Stapleton M., Stupski M.P., Smith T.,
RA Miller S.M., Woodaye T., Worley K.C., Wu D., Yang S., Yao Q.A.,
RA Hills A., Spier S., Shang S., Beng G., Zhao Q., Z
                                                                                                                                                        Matches
                                                                                                                                                                           Query Match
Best Local (
                                                                                                                                                                                                                        PROSITE; PS50084; KH_TYPE_1; 1.
PROSITE; PS00879; ODR_DC_2_2; U
SEQUENCE 470 AA; 49748 MW;
                                                                                324
   384 NIGGGLGRKRPLLGVPRSGMNPTKR---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CG10384,
CG10384,
Drosophila melanogaster (Fruit fly).
Prosophila melanogaster (Fruit fly).
Prosophila melanogaster (Fruit fly).
Prosophila melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=20196006; Pubmed=10731132;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-2000 (TrEMBLrel. 13, 01-JUN-2002 (TrEMBLrel. 21, CG10384 protein.
                                               63
                                                                                                                      3
                  EAEGSLGQADP-----SAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQH 111
                                                                 GLLKPATGVGATMAGLPTTQAGAAALQLPGDGESSGSTLTLLEPPGTALLHPALRNVKTI
                                                                                                   GLLNP-----LLSFPVTDTGEMSLQLPVLEENALRALEELE--RTALLQ-TLRQTVGT 62
                                                                                                                                                        Similarity
37; Conserv
                                                                                                                                                      Conservative
                                                                                                                                                                     12.8%;
                                                                                                                                                    8;
                                                                                                                                                                     Score 81; DB
Pred. No. 14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                              UNKNOWN_1
                                                                                                                                                                                                                      10AFBB194D639F61 CRC64;
                                                                                                                                                Mismatches
                                                                                                                                                                                    DB 5;
-TVMS-LLARAKNSQALH 424
                                                                                                                                              40;
                                                                                                                                                                                Length 470;
                                                                                                                                             Indels
                                                                                                                                              30;
                                                                                                                                         Gaps
                                                                                                                                           9
```

```
2 AMM6 D
                                                                                                                                                                                                                                              RESULT 7
                                                                                                                                                                                                                                                                                         B
                                                                                                                                                                                                                                                                                                                 Ş
                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                        δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Interpro; IPROUVELL
Interpro; IPROUVELL
Pfam; PF01368; DHH, 1.
Pfam; PF02272; DHHA1; 1.
Pfam; PF02272; DHHA1; 1.
TIGRFAMs; TIGR00644; recJ; 1.
TIGRFAMs; TIGR00644; recJ; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q8Y705
                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
    SEQUENCE FROM N.A.
Tan H.K., Yeo C.C., Po
"Complete nucleotide s
Submitted (MAY-1999) t
                                                                                                                             Q9WWY5

Q9WWY5;
Q9WWY5;
Q1-NOV-1999 (TrEMBLrel. 12, Created)
Q1-NOV-1999 (TrEMBLrel. 12, Last sequence update)
Q1-NOV-1999 (TrEMBLrel. 20, Last annotation update)
Q1-MAR-2002 (TrEMBLrel. 20, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Glaser P., Frangeul L., Buchrieser C., Rusniok C., Amend A.,
Baquero F., Berche P., Bloecker H., Brandt P., Chakraborty T.,
Charbit A., Chetouani F., Couve E., de Darvar A., Dehoux P.,
Domann E., Dominguez-Bernal G., Duchaud E., Durant L., Dussurget O.,
Entian K.-D., Fsihi H., Garcia-del Portillo F., Garrido P.,
Gautier L., Goebel W., Gomez-Lopez N., Hain T., Hauf J., Jackson D.,
Jones L.-M., Kaerst U., Kreft J., Kunh M., Kunst F., Kurapkat G.,
Madueno E., Maitournam A., Mata Vicente J., Ng E., Nedjari H.,
Mordsiek G., Novella S., de Pablos B., Perez-Diaz J.-C., Purcell R.,
Remmel B., Rose M., Schlueter T., Simoes N., Tierrez A.,
Vazquez-Boland J.-A., Voss H., Wehland J., Cossart P.,
                                                                                                  Bacteria; Proteobacteria;
                                                                                                                  Pseudomonas putida
                                                                          NCBI_TaxID=303;
                                                                                        Pseudomonas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-MAR-2002
01-MAR-2002
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AL591979; CAC99603.1; -.
                                                                                                                                                                                                                                                                            279 LAPRLNAVGRUGPADPAADLLLTEDPEEALFLAEEIDDAN-----KERKQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=EGD-E / SEROVAR 1/2A;
MEDLINE=21537279; PubMed=11679669;
                                                                                                                                                                                                                                                                                                                                              221
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   listiList; LMO01525; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Science 294:849-852(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Comparative genomics of Listeria
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=1639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hypothetical protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        nterPro; IPR003156; DHHA1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Listeriaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listeria monocytogenes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LM01525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8Y705;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q8Y705
                                                                                                                                                                                                                                                                                                                   62
                                                                                                                                                                                                                                                                                                                                                                         9
                                                                                                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6
                                                                                                                                                                                                                                                                                                       ----TEAEGSLGQADPSAE---TPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQ 110
                                                                                                                                                                                                                                                                                                                                 LVAVGTVADLVS--LTDENRLLVQLGLRQLRESANLGLAVLAKKASLKLEEATEETIGFG
                                                                                                                                                                                                                                                                                                                                                            LLFVGLLNPLLSFPVTDTGEMSLQLPV--LEENALRALEELERTALL---QTLRQTVG--
                                                                                                                                                                                                                                                                                                                                                                                                   36;
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (TrEMBLrel. 20, Created)
(TrEMBLrel. 20, Last sequence update)
(TrEMBLrel. 21, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Listeria
                              Poh C.L.;
sequence of Tn4652.";
to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                              12.7%;
31.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            lmo1525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacillus/Clostridium group; Bacillales;
                                                                                            gamma subdivision; Pseudomonadaceae;
                                                                                                                                                                                                                                                                                                                                                                                                17;
                                                                                                                                                                                                                                                                                                                                                                                                          Pred.
                                                                                                                                                                                                                                                                                                                                                                                                           Score 80.5;
Pred. No. 29
                                                                                                                                                                                                                                                                                                                                                                                                                                                  proteome.
5FA78A3524AD94FD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hland J., Cossart p.;
species.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              783
                                                                                                                                                                                                                                                                                                                                                                                                             29;
                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
                                                                                                                                                                                                                                                                                                                                                                                                                    16; Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    update)
                                                                                                                                                                                                                                                                                                                                                                                            36;
                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                          27;
                                                                                                                                                                                                                                                                               323
                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                         6;
```

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ₽
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
 Best Loc
Matches
                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Site-specific resolution system encoded by toluene catabolic transposon Tn4651.";
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AF151431; AAA044277.1; -
EMBL; AB077820; BAB83832.1; -
InterPro; IPR002104; Phage_integrase.
InterPro; IPR004107; Phage_integr_N.
Dfam. DR00680. Dhace integr_N.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [2]
SEQUENCE FROM
PLASMID=PWW0;
                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY-2000
01-MAY-2000
01-JUN-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Genka H., Nagata Y.,
                                                                   MEDLINE-20036896; PubMed-10567266;
white O., Eisen J.A., Heidelberg J.F., Hickey E.K., Peterson J.D.,
Dodson R.J., Haft D.H., Gwinn M.L., Nelson W.C., Richardson D.L.,
Moffat K.S., Qin H., Jiang L., Pamphile W., Crosby M., Shen M.,
Vamathevan J.J., Lam P., McDonald L., Utterback T., Zalewski C.,
Makarova K.S., Aravind L., Daly M.J., Minton K.W., Fleischmann R.D.,
Ketchum K.A., Nelson K.E., Salzberg S., Smith H.O., Venter J.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Q9RXG0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Plasmid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPRU(
Pfam; PF00589;
                                                                                                                                                                                                                                                                                                                                                                                           DR0353
                                                                                                                                                                                                                                                                                                                                                                                                      RIBONUCLEASE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9RXG0;
                                                                                                                                                                                                                                                                                                                                                                    Bacteria; Thermus/Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                Deinococcus
                                                                                                                                                                                    Science 286:1571-1577(1999).
                                                                                                                                                                                             "Genome sequence of the radioresistant bacterium Deinococcus radiodurans {\sf R1."};
                                                                                                                                                                                                                     Fraser C.M.;
                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=1299;
                                                                                                                                                                                                                                                                                                                                                          Deinococcaceae;
                                                                                                                                                            TIGR; DR0353;
                                                                                                                                                                        EMBL; AE001895; AAF09933.1;
                                                                                                                                                 InterPro; IPR004476; 3_prime_RNase
                                                                                                                           interpro; IPR001900; Ribonuclease_II.
interpro; IPR003029; S1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33 LPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPS-AETPTPR-----GSLR 85
Local Similarity
les 32; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAQTKQAAPLQLQHLEQAIQWLSREAEQAQQSG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          KALTGQDSNTVLSRL-----LARTRKQRKQHG 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LPATSDNIVRYLVEYADTLSLSTLKQRLAALAQWHITQGFPDPTKTPTVRQVLKGIRTLH 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PF02899; Phage_integr_N; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FROM
                                             proteome.
760 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                 0 (TrEMBLrel. 13, 'O') (TrEMBLrel. 13, 'C') (TrEMBLrel. 21,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         323 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                radiodurans
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRELIMINARY;
   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Phage_integrase; 1.
                                                                                                                                                                                                                                                                                                                                                          Deinococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35835 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tsuda M.;
                                              84741 MW;
               12
27
            . 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
   15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score
Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                         Created)
            Score 77.5;
Pred. No. 54
                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                      group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8128EE6FDCC97CD8 CRC64;
                                               1585C0779A8746E3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mismatches
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      277.5;
                                                                                                                                                                                                                                                                                                                                                                       Deinococci; Deinococcales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               760
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DΒ
                          DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
    39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                          Length
     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        323;
                           760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  13
     29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
--
     5
```

```
Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          밁
                                                                                                                                                                                                               RESULT 10
Q9VM02
                                                                                                                                                                                                                                                                                  20
                                                                                                                                                                                                                                                                                                           뫄
                                                                                                                                                                                                                                                                                                                                δÃ
                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                              Q
Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JUN-1998 (TrEMBLrel.
01-JUN-1998 (TrEMBLrel.
01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTPase activating protein for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    044090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                044090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chen F., Barkett M., Ram K.T., Quintanilla A., Submitted (SEP-1997) to the EMBL/GenBank/DDBJ EMBL; AF023478; AAB87873.1; -
FlyBase; FBgn0014015; Rapgap1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; P
Pterygota; Neoptera;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RAPGAP1 OR
Drosophila
                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Interpro; IPR003880; Ppantne_attach.
Interpro; IPR000331; Rap_GAP.
pfam; PF02145; Rap_GAP; 1.
PROSITE; PS00012; PHOSEHOPANTETHEINE; UNKNOWN_1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-EYE-IMAGINAL DISC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ephydroidea;
   STRAIN-BERKELEY;
MEDLINE-20196006; PubMed=10731132;
Adams M.D., Celniker S.F. UCl. Amanastia.
                                                                                                 RAPGAP1 protein.

RAPGAP1 OR CG6682.

ROSophila melanogaster (Fruit fly).

Eukaryota; Metazoa; Arthropoda; Tracheata; Hexapoda;

Eukaryota; Metazoa; Arthropoda; Diptera; Brachyce
                                                                  Pterygota; Neoptera; Endopterygota; Diptera; Brachycera; Ephydroidea; Drosophilidae; Drosophila.
NCBI_TaxID=7227;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        433
                                                                                                                                                        01-MAR-2002 (TrEMBLrel.
                                                                                                                                                                 01-MAY-2000
01-MAY-2000
                                                                                                                                                                                          Q9VM02;
                                                                                                                                                                                                      Q9VM02
                                                                                                                                                                                                                                                                                                                                                           480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                              532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23
                                                                                                                                                                                                                                                                590
                                                                                                                                                                                                                                                                                     102
                                                                                                                                                                                                                                                                                                                                   51
                                                                                                                                                                                                                                                                                                                                                                                 N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VGTEAEGSLGQADPSAETPTPRG--SLRKALTGQDSNTVLSRLLARTRKQRKQHG 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VDKDGRMEL-IPIREETARGMIEDLMLLANKVVAHYLIEREIPTLFRIHEEPTLQKFQDV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TG--AIGRLGFSFPGGE-PTPQAYQAVLKQVRGTGRESVVNTLLLRSMQQAKYAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VTDTGEMSLQLPVLEENALRALEELERTA-----
                                                                                                                                                                                                                                                                                                            SLLONICEELREKTRDFLGTDLSQTSAGSPTP--ETPKAESGSGGNAGSRFIDTVKKALI 589
                                                                                                                                                                                                                                                                                                                                  ALLOTLRQTVGTEAEGSLGQ--ADPSAETPTPRGSLRKALTGQDSN-----TVLSRLL 101
                                                                                                                                                                                                                                                                                                                                                         DDVPF-----FGPTLPNPAVFRKGQEFKEF1LTKLINAENACYKAEKFAKLEQRTRT
                                                                                                                                                                                                                                                                                                                                                                                DRVPFCCLLFVGLLNPLLSFPVT-----DTGEMSLQLPVLEENA-----LRALEELERT
                                                                                                                                                                                                                                                                MRVRSQSVDTG
                                                                                                                                                                                                                                                                                       ARTRKQRKQHG
                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
38; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Metazoa; Arthropoda;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               melanogaster (Fruit fly).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CG6682.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       850 AA;
  P.G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                   (TrEMBLrel.
                                                                                                                                                                               (TrEMBLrel.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Drosophilidae;
                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                       112
  Scherer S.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                         92879 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arthropoda; Tracheata; Hexapoda; Inse
Endopterygota; Diptera; Brachycera;
ilidae; Drosophila.
                                                                                                                                                                                                                                                                                                                                                                                                                    12.2%;
29.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  20,06
                                                                                                                                                        13,
13,
20,
                                                                                                                                                                                                                                                                                                                                                                                                         11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Created)
 Holt R.A., EV.E., Li P.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                  Score 77;
Pred. No. (
                                                                                                                                                         Last sequence update)
Last annotation updat
                                                                                                                                                                                Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RAP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         0D0855F88CB76BB3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                       No. 68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  850
  Evans C.A.,
, Hoskins R
                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ΑA
                                                                                                                                                                                                         B
                                                                                                                                                         update)
                                                                                                                                                                                                                                                                                                                                                                                                            52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           databases
                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 850;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Hariharan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                --------LLQTLRQT 59
                                                                                                                                                                                                                                                                                                                                                                                                             Indels
    Gocayne J.
.A., Galle
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Insecta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Muscomorpha;
                                                                                                 Muscomorpha
                                                                                                                                                                                                                                                                                                                                                                                                             30;
    R.F.
                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              491
                                                                                                                                                                                                                                                                                                                                                                531
                                                                                                                                                                                                                                                                                                                                                                                      50
                                                                                                                                                                                                                                                                                                                                                                                                              6.
```

```
Q9NPI6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RAARA 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RA Dodson K. Doup L.E., Downes M., Dugan-Rocha S., Dunkov B.C., Dunn P., RA Dourbin K.J., Evangelista C.C., Ferraz C. Ferriera S., Fleischmann P., RA Fosler C., Gabrielian A.E., Garg N.S., Gelbart W.M., Glasser K., RA Glodek A., Gong F., Gorrell J.H., Gu Z., Guan P., Harris M., RA Hortin D., Houston K.A., Howland T.J., Hernandez J.R., Houck J., RA Hostin D., Houston K.A., Howland T.J., Wei M.-H., Ibogwam C., RA Kimmel B.E., Kodira C.D., Kraft C., Kravitz S., Kulp D., Lai Z., RA Liux., Mattei B., McIntosh T.C., McLeod M.P., McPherson D., RA Merkulov G., Milshina N.V., Mobarry C., Motris J., Moshrefi A., RA Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M., RA Nelson D.R., Nelson K.A., Nixon K., Nusskern D.R., Pacleb J.M., RA Palazzolo M., Pittman G.S., Pan S., Pollard J., Puri V., Reese M.G., Shue B.C., Siden-Kiamos I., Simpson M., Skupski M.P., Smith T., RA Spier E., Spradling A.C., Stapleton M., Strong R., Sun E., Spradling A.C., Stapleton M., Strong R., Sun E., Sun S. M., Woodage T., Warley K.C., Wang A.H., Wang X., Yeh R.-F., Zaveri J.S., Zhan M., Zhang G., Zhao Q.A., RA Alliams S.M., Woodage T., Warley K.C., Wu D., Yang S., Yao Q.A., RA Zheng X.H., Zhong F.N., Zhong W., Zhou X., Zhu X., Smith H.O., The Genome sequence of Drosophila melanogaster.", EMBL: AB003617: AAF52526.1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local :
                                                                                                                                                                                                                                   Q9NPI6;
01-OCT-2000
01-OCT-2000
01-DEC-2001
                                                                                                                                                                                      Transcription
                                                            Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                     Q9NPI6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR000331; Rap_GAP.
Pfam; PF02145; Rap_GAP; 1.
PROSITE; PS00012; PHOSPHOPANTETHEINE; UNKNOWN_1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    590
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AE003617; AAF52526.1; FlyBase; FBgn0014015; Rapgar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR003880; Ppantne_attach.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ballew R.M., Basu A., Baxendale J., Bayraktaroglu L., Beasley E.M., Beesson K.Y., Benos P.V., Berman B.P., Bhandari D., Bolshakov S., Borkova D., Botchan M.R., Bouck J., Brokstein P., Brottier P., Burtis K.C., Busam D.A., Butler H., Cadieu E., Center A., Chandra I., Cherry J.M., Cawley S., Dahlke C., Davenport L.B., Davies P., de Pablos B., Delcher A., Deng Z., Mays A.D., Dew I., Dietz S.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        480
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            George R.A., Lewis S.E., Richards S., Ashburner M., Henderson S.N., Brandon R.C., Wortman J.R., Yandell M.D., Zhang Q., Chen L.X., Brandon R.C., Rogers Y.-H.C., Blazej R.G., Champe M., Pfeiffer B.D., Wan K.H., Doyle C., Baxter E.G., Helt G., Nelson C.R., Miklos G.L.G., Abril J.F., Agbayani A., An H.-J., Andrews-Pfannkoh C., Baldwin D.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 DRVPFCCLLEVGLLNPLLSFPVT-----DTGEMSLQLPVLEENA-----LRALEELERT 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MRVRSQSVDTG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ARTRKORKOHG 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLLQNLCEELREKTRDFLGTDLSQTSAGSPTP--ETPKAESGSGGNAGSRFIDTVKKALI 589
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ALLQTLRQTVGTEAEGSLGQ--ADPSAETPTPRGSLRKALTGQDSN-----TVLSRLL 101
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DDVPF-----FGPTLPNPAVFRKGQEFKEFILTKLINAENACYKAEKFAKLEQRTRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Similarity
                                                                                                                                                                                                                  0 (TrEMBLrel. 15, of the control of 
                            Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                  factor (CDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        600
                Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                92893
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12.2%; Score 77;
29.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rapgap1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MW;
                                                                                                                                                                          Last sequence update;
Last annotation update;
FLJ11107 fis, clone PLAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11;
                                                                                                                                                                                                                                                                                                    Created)
                Craniata;
                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47E7F0483CB76BB3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                                                                         582
    Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       83
                                                                                                                                                      clone PLACE1005803) (SMIF
                                                                                                                                                                                                                                                                                                                                                                         ΑA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 5; Length 850
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           531
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  6,
```

```
RESULT
Q8VMK5
                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                          Q
                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                     Qγ
Query Match
Best Local Similarity
Matches 29; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                     Q8VMK5;
01-MAR-2002
01-MAR-2002
                                                                 Pfam;
                                                                            InterPro; IPR004107; Phage_integr_N. Pfam; PF00589; Phage integrase. 1
                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                      NCBI_TaxID=303;
                                                                                                                                                                                                                                   01-MAR-2002 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
                                                                                                                                                                                  Pseudomonas
                                                                                                                                                                                              Bacteria;
                                                                                                                                                                                                     Plasmid pwwo
                                                                                                                                                                                                               Pseudomonas putida.
                                                                                                                                                                                                                           Putative cointegrate
                                                                                                                                                                                                                                                                                 Q8VMK5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; AJ275986; CAB77023.1;
EMBL; AK001969; BAA92008.1;
EMBL; BC007439; AAH07439.1;
SEQUENCE 582 AA; 63278 My
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Nishikawa T., Nagai K., Sugano S., Aotsuka S., Yoshikawa Matsunawa H., Ishii S., Kawai Y., Saito K., Yamamoto J., Nakamura Y., Nagahari K., Masuho Y., Sasaki N.; "NEDO human cDNA sequencing project."; Submitted (FEB-2000) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                 464 QQNQDPEVF 472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "SMAD4-interacting transcritpion factor.";
"SMAD4-interacting transcritpion factor.";
                                                                                                                                                                                                                                                                                                                                                       110 QHGTAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Strausberg R.;
Submitted (MAY-2001) to the
                                                                                                                                                                                                                                                                                                                                                                                                            353 SPLLNOPVPELSHASL---IANQSPFRAPLNVTNTAGTSLPSVDLLQKLRLTPQHDQIQT 409
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=MUSCLE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=PLACENTA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Isogai T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=PANCREAS;
                                                                                                                                                                                                                                                                                                                                                                                                     58
                                                                                                                                                                                                                                                                                                                                                                                                                                             16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local Similarity
                                                          PF02899; Phage_integr_N;
                                                                                                                                                                                                                                                                                                                                                                     QPLGKGAMVASFSPAAGQLATPESFIEPPSKTAAARVAASASLSNMVLAPL----
                                                                                                                                                                                                                                                                                                                                                                                       QTVG-----TEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRK 109
                                                                                                                                                                                                                                                                                                                                                                                                                                  NPLLSFPVTDTGEMSLQLPVLEENALRALEELERTA-----LLQTLR----
                                                                                                                                                                                          Proteobacteria;
                                           323
                                                                                                                                                                                                                                                                               PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ota T., Hayashi K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                          AA;
                                                                     Phage_integrase;
                                          35807 MW;
                                                                                                                                                                                                                    resolution protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       63278 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        12.1%;
27.1%;
                                                                                                                                                                                                                                   20,
20,
21,
                                                                                                                                                                                   gamma subdivision; Pseudomonadaceae;
                                                                                                           Williams P.A., Thomas C.M.;
nce of IncP-9 plasmid pww0.";
e EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                            14;
                                                                                                                                                                                                                              Last sequence update)
Last annotation updat
                                                                                                                                                                                                                                                       Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 76.5;
Pred. No. 4
                                     84FB0354D458F5C8
                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26480D0B10CE7C72 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sugiyama
S., Aotsu
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          iyama T., Otsuki T., Suzuki Y.,
Aotsuka S., Yoshikawa Y.,
Saito K., Yamamoto J., Wakamatsu
                                                                                                                                                                                                                                                                            323
                                                                                                                                                                                                                      S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49;
                                                                                                                                                                                                                                                                           AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                               update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                          45;
                                   CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 582;
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                        35;
                                                                                                                                                                                                                                                                                                                                                                     -QSM 463
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                  57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Α.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     5.
```

Conservative

31.2%; 11.9%;

Score 75.5; [Pred. No. 30; ll; Mismatches

DB 2;

Length 323; Indels

40;

13;

Gaps

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                  RESULT
000153
                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                        Š
                                                                                                                                                                                                                                                                                                    밁
 TED ACC DE DE COC OCC RRP RRP RR CRA
                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local S
Matches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9BQ19 PRELIMINARY;
Q9BQ19;
Q1-JUN-2001 (TrEMBLrel. 17, La
Q1-JUN-2001 (TrEMBLrel. 21, La
Q1-JUN-2002 (TrEMBLrel. 21, La
Similar to clones 23667 and 2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Homo sapiens (Human).
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg R;
Submitted (NOY-2000) to the EM
EMBL; BC004357; AAH04357.1; --
EMBL; BC000330; AAH00330.1; --
Interpro; IPR000822; Znf_C2H2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Strausberg R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-LUNG;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00096; zf-C2H2; 1.

SMART; SM0355; ZNF_C2H2; 1.

PROSITE; PS00028; ZNC_FINGER_C2H2_1; UNKNOWN_1.

PROSITE; PS50157; ZNC_FINGER_C2H2_2; 1.

DNA-binding; Zinc_finger:

DNA-binding; Zinc_finger:

B3A06732DA0C01F8 CRC64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Submitted (MAR-2001)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID-9606;
                                                                                                                                     01-JUL-1997
01-JUL-1997
01-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE-LUNG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                          000153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \omega
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    95
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          86 KALTGQDSNTVLSRL-----LARTRKQRKQHG 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     35
MEDLINE=96207227; PubMed=8619474; Andersson B., Wentland M.A., Ricafrente J.Y., Liu W., a 'double adaptor' method for improved shotgun librar
                                      TISSUE-BRAIN;
                                                                        NCBI_TaxID-9606;
                                                                                     Eukaryota, Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi:
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                 Homo sapiens (Human).
Eukaryota; Metazoa; C
                                                                                                                        Zinc finger protein.
                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                     103
                                                                                                                                                                                                                                                                                                    43
                                                                                                                                                                                                                                                                                                                            22
                                                                                                                                                                                                                                                                            78
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PAQTKQAAPLQLQHLEQAIQWLSREAEQAQQSG 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LPATSDNIARYLVEYADTLSLSTLKORLAALAQWHITOGEPDPTKTPTVRQVLKGIRTLH 94
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPS-AETPTPR-----GSLR
                                                                                                                                                                                                                                                    TSESSSLLQDLQPSDSTSFI--LLNLTR 128
                                                                                                                                                                                                                                                                        PTPRGSLRKALTGQDSNTVLSRLLARTR 105
                                                                                                                                                                                                                                                                                                   PYTEASECSRLMLPDDTTNHSNSSKEVPSSAVLRSLRVNVGPDGEETRAQTVOKSPEFLS 102
                                                                                                                                                                                                                                                                                                                           PYTDTGEMS-LQLPVLEENALRALEELERTALLQTLROTVGTEAEGSLGOA---DPSAET
                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                      (TrEMBLrel. 04, Created)
(TrEMBLrel. 04, Last sequence up
(TrEMBLrel. 20, Last annotation
                                                                                                                                                                                         PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ç
                                                                                                                                                                                                                                                                                                                                                                   11.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation update)
23775 zinc finger protein.
                                                                                                                                                                                                                                                                                                                                                       15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                 Score 75;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT:
                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              272
                                                                                                                                                                                             478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AΑ
                                                                                                                                                                                                                                                                                                                                                                               DB 4; Length 272:
                                                                                                                                                       update)
                                                                                                                                           update)
                                                                                                                                                                                                                                                                                                                                                          39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      databases
                                                                                                                                                                                                                                                                                                                                                          Inde1s
                    Gibbs R.A.;
                                                                                                                                                                                                                                                                                                                                                            6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       85
                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                        77
                                                                                                                                                                                                                                                                                                                                                             ω
```

library

ω

```
RESULT 15
Q9A8X
Q9A8X
AC Q9A8X
AC Q9A8X
DT 01-JU
DT 01-JU
DT 01-M,
DE Oxid
GN CC12
OS Caul
OC Bact
OC Bact
CC STF
RX MEF
RX MEF
RA N1
RA PO
RA D6
RA D7
RA S
RA D6
RA S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Š
                               Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                       Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Yu W., Andersson B., Worley K.C., Muzny D.M., Ding Y., I Ricafrente J.Y., Wentland M.A., Lennon G., Gibbs R.A.; "Large-scale concatenation cDNA sequencing.". Submitted (FEB-1997) to the EMBL/GenBank/DDBJ databases.i. Submitted (FEB-1997) to the EMBL/GenBank/DDBJ databases.i. SUBCLIULAR LOCATION: NUCLEAR (BY SIMILARITY).

EMBL; U99919; AAB51059.1; -..
HSSP: P08047; 1SP2.
InterPro; IPR000822; Znf_C2H2.
                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Anal. Biochem. 236:107-113(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PFONTS; PRO0096; zf-C2H2; 5.
PRINTS; PRO0048; ZINCFINGER.
SMART; SM00355; ZINC_CH2; 5.
PROSITE; PS00028; ZINC_FINGER_C2H2_1; 5.
PROSITE; PS50157; ZINC_FINGER_C2H2_2; 5.
DNA-binding; Metai-binding; Nuclear protonal control 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEOUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         construction.";
                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-21173698; PubMed-11259647;
Nierman W.C., Feldblyum T.V., Laub M.T., Paulsen I.T., Neison K.
Eisen J., Heidelberg J.F., Alley M.R.K., Ohta N., Maddock J.R.,
Potocka I., Nelson W.C., Newton A., Stephens C., Phadke N.D., El
DeBoy R.T., Dodson R.J., burkin A.S., Gwinn M.L., Haft D.H.,
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Craven M.B., Khouri H., Shetty J., Berry
Kolonay J.F., Smit J., Smit J., Stephens C., Smit J., Shetty J., Berry
Kolonay J.F., Smit J., Smit J., Shetty J., Berry
Kolonay J.F., Smit J., Shetty J., Berry
Kolonay J.F., Smit J., Shetty J., Shetty J., Berry
Kolonay J.F., Smit J., Shetty J., Berry
Kolonay J.F., Smit J., Shetty J., Shetty J., Shetty J., Berry
Kolonay J.F., Smit J., Shetty J., Shetty
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUN-2001 (TrEMBLrel. 17, 01-JUN-2001 (TrEMBLrel. 17, 01-MAR-2002 (TrEMBLrel. 20, 01-MAR-2002 (TrEMBLrel. 20, 01-MAR-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Oxidoreductase, FAD-binding. CC1219.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q9A8X8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q9A8X8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Caulobacter crescentus.
Bacteria; Proteobacteria; alpha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
STRAIN-ATCC 19089 / CB15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=155892;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Caulobacter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 103
                                                                                                                                                                                                                                                                                                                 Interpro; IPR001575: Oxid_FAD_bind.
pfam; PF01565; FAD_binding_4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        43
                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                     Complete
                                                                                                                                                                                                                                                                                                                                                                                               TIGR; CC1219:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22 PYTOTGEMS-LOLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGOA---DPSAET
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    78
                                       28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TSESSSLLQDLQPSDSTSF1--LLNLTR 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PVTEASECSRLMLPDDTTNHSNSSKEVPSSAVLRSLRVNVGPDGEETRAQTVQKSPEFLS 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PTPRGSLRKALTGODSNTVLSRLLARTR 105
EMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETP---TPRGSL 84
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                          l Similarity
29; Conser
                                                                                                                                                                                                                                                                                 proteome.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                        468 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11.8%;
                                                                                                                                                                                                                                                        51112 MW:
                                                                                                                                                 11.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 75; DB pred. No. 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Created)
                                                                                                                     Score 74.5; Di
Pred. No. 58;
9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 clear protein; Zinc-fing
1D7F7El39618F863 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                               FAB8574BE13768C3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   subdivision; Caulobacter group;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        468 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 4;
                                                                                                                                                                                               DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Zinc-finger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 478
                                                                                                                            32;
                                                                                                                                                                                               16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                   Length
                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Liu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Neison K.E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Σ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6
                                                                                                                                   7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   white 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ely
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               w
```

QУ 85 RKALTGODSNTVLSRLL 101 :| | | | : 393 AVHAYYRDDFTFLYELI 409 337 EMEFHLPV--ENQLKALEEVMRT--IETERPDVFFP1EVRR1AADDAWLSPFYAAPRGSV 392

Search completed: March 10, 2003, 17:46:35 Job time: 25.6027 secs

Db

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Run on:
                                                                                                                                                                                                                                                                                                                                    Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
          434
312.5
312.5
                                                                                                                                                                                                                                          Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq
seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          length:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                length:
                                                                                                                                                                                                                                        Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-09-831-907A-33
641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           March 10, 2003, 17:24:52; Search time 29.9189 Seconds (without alignments) 547.808 Million cell updates/sec
                                                                                                                                                                          100.0
                                                                                                                                                                                                                                                             Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               BLOSUM62
          100
84
84
84
83
67
48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            908470 seqs, 133250620 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 MDRVPFCCLLFIGLLNPLLS...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A_Geneseq_101002:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1980.DAT:*/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1988:DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1982.DAT:
/SIDS2/gcgdata/geneseq/geneseqp-embl/AA1983.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1984.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1987
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             'SIDS2/gcgdata/geneseq/geneseqp-embl/AA1986.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1985.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2000_DAT:
/SIDS2/gcgdata/geneseq/geneseqp-emb1/AA2001_DAT:
                                                                                                                                                                                                                                      Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1997.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1996.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1995.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1994.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1992.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1990.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /SIDS2/gcgdata/geneseq/geneseqp-embl/AA1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1993.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1991.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /SIDS2/gcgdata/geneseq/geneseqp-emb1/AA1989.DAT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                          /gcgdata/geneseq/geneseqp-embl/AA2001
                                                                                                                                                                                                                                        ID
                                                                                   AAY93644
AAB60442
AAU80121
                                                                                                                                                   AAB60445
AAU80124
                                                                                                                                                                                                AAY93647
                                              AAY93645
                                                                    AAY93648
                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ....TRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      908470
                 Rat sensory epithe
Amino acid sequenc
Amino acid sequenc
Bovine SENR ligand
                                                                                                                                                                                                                                Description
                                                                                                    Amino acid sequenc
Rat urotensin II-l
                                                                                                                                            Amino acid sequenc
Mouse urotensin II
Mouse urotensin II
Cow sensory epithe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . DAT :
```

nsin-II	N	22	14	13.3	85	Ū
hunc-2 prot	AAU75360	23	1090		, J	
	41	21	509	13.3	85.5	. ω
Amino acid sequenc	AAY93646	21	14	•	8	١
	AAE09769	22	2249	13.9	89	_
Drosophila melanog	ABB60977	22	2249	•	89	U
II.	AAB60443	22	17	14.2	91	
Urotensin-II pepti	AAE02904	22	17	•	95	w
rotensin II	AAU80122	23	17		96	_
urote	AAU80125	23	17		103	1 ()
	AAB60446	22	17	•	103	01
no acid	AAY93649	21	17	•	108	45
urotensin	AAU80126	23	20	17.3	111	· w
rotensin II	AAB60449	22	20	•	111	2
urotensin	AAU80128	23	20	•	123	_
se urotensl	AAB60451	22	20	19.2	123	0
urotensin II	AAU80127	23	24	20.0	128	
rotensin II-	AAB60450	22	24	•	128	, α
urotensin	AAU80129	23	24	21.8	140	7
Mouse urotensin II	AAB60452	22	24	٠	140	on
ensory epi	AAU80116	23	85	27.4		. 01
SENR ligand	AAB12497	21	85	•		4
Urotensin	AAY39391	20	103	٠		. ω
Urote	AAY39390	20	139	31.4	201.5	0
no acid	AAY93640	21	104	•		_
Senso	AAU80115	23	121	۳		0
SENR ligand	AAB12496	21	121			9
8201088	AAU81965	23	124	ω		8
	ABG34042	23	124			7
PRO1068	AAB50919	22	124	w ·		,
PRO1068	AAB65230	22	124	43.9	281.5	G
unosti	AAB20118	22	124	٠		4
ane-bound pr	70	21	124	•		w
signal pept	731	21	124	44.7		2
Amino acid sequenc	AAY93639	21	124	44.7		_

ALIGNMENTS

```
RESULT 1
AAY93647
                                                                                                                           FT EXX
ET ET
                                                                                                                                                                                XXXXX
                                                                                                                                                                                                                                              XXXXI
               26-NOV-1998;
                                 26-NOV-1999;
                                                    02-JUN-2000.
                                                                     WO200031265-A1.
                                                                                               Peptide
                                                                                                                 Peptide
                                                                                                                                            кеу
                                                                                                                                   Peptide
                                                                                                                                                             Mus sp.
                                                                                                                                                                                amyotrophic lateral
                                                                                                                                                                                        Urotensin II; motor spinal cord trauma;
                                                                                                                                                                                                              Amino acid sequence of murine prepro-urotensin II (UII) polypeptide
                                                                                                                                                                                                                                                       AAY93647;
                                                                                                                                                                                                                                                                      AAY93647 standard; Protein; 123
                                                                                                                                                                                                                                    25-SEP-2000
                                                                                                                                                                                                                                   (first entry)
               98FR-0014914.
                                99WO-FR02941
                                                                                     /note= "utotensin II"
                                                                                              /note= "pro-segment"
107..123
                                                                                                                 21..106
                                                                                                                       /note= "signal peptide
                                                                                                                                          Location/Qualifiers
                                                                                                                                                                           neuron; hypertensive; neurodegeneration; hemi-plegia; para-plegia; sclerosis; antihypertensive agent.
                                                                                                                                                                                                                                                                       ΑA
```

(INRM) INST NAT SANTE & RECH MEDICALE

```
RESULT 2
AAB60445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ş
 밁
                                                                                                                                                                                                                                                                                                                                                                                                                            ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WP1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antihypertensive agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-piegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               In mammals, urotensin II promotes survival and regenerat neurons, and also has a hypertensive effect. The urotens polypeptides and polynucleotides are useful for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The present sequence represents a murine prepro-urotensin II polypeptide. In mammais, urotensin II promotes survival and regeneration of motor neurons, and also has a hypertensive effect. The urotensin II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ciaim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New mammailan urotensin II polypeptide, useful for treating neurodegeneration and spinal cord injury -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Beauviiiain J,
                                                                                                                                                                                                                                                                                                      Urotensin II-like peptide; precursor protein; mouse; murine; SENR ligand;
drug screening; sensory epithelium neuropeptide-like receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                            AAB60445 standard; Protein; 123
Urotensin II-iike peptide originating in rat or mouse and encoded nucleic acid, useful in study of its physiological effects, for
                                                                                                                                                                                                                                                                                                                                                                        24-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                  AAB60445
                                        WPI; 2001-147192/15
N-PSDB; AAF59584.
                                                                                                                                     08-JUL-1999;
                                                                                                                                                                                                                      WO200104298-A1
                                                                                                                                                                                                                                                Mus sp
                                                                                                                                                                                                                                                                          circulatory function
                                                                                                                                                                                                                                                                                        diagnosis; central nervous
                                                                                                                                                                                                                                                                                                                                            Mouse urotensin II-iike peptide precursor protein, SEQ ID NO:26
                                                                                                           (TAKE )
                                                                                                                                                               06-JUL-2000; 2000WO-JP04484
                                                                                                                                                                                             18-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Locai Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ب
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2000-400075/34.
DB; AAA46719.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKOHKQHGAAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK 120
                                                                                                           TAKEDA CHEM IND LTD
                                                                                Kurihara M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     31;
                                                                                                                                     99JP-0194091
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Coulouarn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   42pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         100.0%;
                                                                                  Kitada C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y,
                                                                                                                                                                                                                                                                                        function; cardiac
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Jegou
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 641; DB 21; Pred. No. 3.1e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                              Ą
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                  Mori M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Lihrmann I,
                                                                                                                                                                                                                                                                                          function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indeis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Vaudry H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
```

```
RESULT 3
AAU80124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Š
Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           like peptides or their precursors, an antibody against a urotensin II-
ike peptide or precursor, a method of screening for compounds which can
modulate the binding of urotensin II-like peptides to the SENR, the
compounds thus identified, and a method of quantitating urotensin II-like
peptides or their precursors. The peptides and proteins, and nucieic
acids encoding them are useful in study of the physiological effects of
urotensin II-like peptide/SENR interactions, and for the diagnosis and
development of drugs (including gene therapy compositions) for modulating
e.g. central nervous function, cardiac function and circulatory
function. The present sequence represents the mouse urotensin II-like
peptide precursor protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The invention relates to novel rat and mouse urotensin II-like peptide (AAB60443-AAB604444, AAB60446, AAB60449-AAB604452), their amides; esters or saits, their precursor proteins (AAB60442, AAB60445), and to nucleic acids encoding the urotensin II-like peptides (AAF59575-AAF59576, AAF59585-AAF59589) or the urotensin II-like peptide protein precursors (AAF595774, AAF59584). The urotensin II-like peptides are ilgands of the sensory epithelium neuropeptide-like receptor (SEMR). The invention aiso relates to vectors and transformants comprising the novel nucleic acid sequences, the recombinant production of the rat or mouse urotensin II-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           diagnosis and development of drugs for controlling e.g. central nervous
                                                                                                                                                                                                                                                                               SENR; sensory epithelium neuropeptide-like recep
attention deficit disorder; narcolepsy; anxiety;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           function
                                                                                                                                                                                                                                                                                                                                                                       07-0CT-2002
                                                                                                                                                                                                                                                                                                                                                                                                         AAU80124;
                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU80124 standard;
                                                                                                                                                                                                                                                              schizophrenia;
                                                                                                                                                                                                                                                                                                                                 Mouse urotensin II-like peptide #1
                                                10-AUG-2001; 2001WO-JP06899
                                                                                  21-FEB-2002
                                                                                                                    WO200214513-A1
                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                                            Mus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Page
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                epithelium neuropeptide-like receptor; mouse; fear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         99;
                                                                                                                                                                                                                                                              G protein-coupled; receptor.
                                                                                                                                                                                        Location/Quaiifiers
                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         110pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                           Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%;
                                                                                                                                                        "Proglutamic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 641; DB 22;
Pred. No. 3.1e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                             Ą
                                                                                                                                                        acid or glutamine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                  depression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0;
                                                                                                                                                                                                                                                                                      insomnia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60
```

0;

10-AUG-2000; 2000JP-0247968

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY93644
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   attention deficit disorder, narcolepsy, anxiety, depression, insom schizophrenia or fear. The polypeptides of the invention, their precursor proteins and their encoding DNAs are useful in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, inso schizophrenia or fear. They are also useful for gene therapy. The polypeptide is a G protein-coupled receptor protein, with ligand activity to sensor epithelium neuropeptide-like receptor. The present of the present of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           narcolepsy agent containing a polypeptide with a sequence identical or substantially similar to a fully defined 12 amino acid sequence given the specification, and its amide, ester or their salt. The peptides have ligand activity to sensory epithelium neuropeptide-like receptor (SENR) protein. The invention also includes a method for diagnosing attention affort discrete processors.
                                                                                                                                                                                                                                                          Urotensin II; motor spinal cord trauma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Polypeptide GPR12 with ligand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these
                          Peptide
                                                                     Peptide
                                                                                                                    Peptide
                                                                                                                                                                                       Rattus
                                                                                                                                                                                                                                amyotrophic
                                                                                                                                                                                                                                                                                                                                  Amino acid
                                                                                                                                                                                                                                                                                                                                                                               25-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY93644 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence represents the mouse neurotensin II-like peptide of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention relates to an anti-attention deficit disorder or anti-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-PSDB; ABK50030.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2002-329576/36
                                                                                                                                                                                       вp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Page 280;
                                                                                                                                                                                                                                                                                                                               sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               narcolepsy, and for anxi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe T,
                          /note= "¡
110..123
                                                                         21..109
                                                                                                                                          Location/Qualifiers
    /note=
                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             290pp; Japanese.
                                                                                                                                                                                                                                                   neuron; hypertensive; neurodegeneration hemi-plegia; para-plegia;
                                                                                                                                                                                                                                                                                                                             of rat
                                                                                                                                                                                                                           sclerosis; antihypertensive agent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  anxiety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           100.0%;
                                                                                        "signal peptide"
"urotensin II peptide"
                                          "pro-segment peptide"
                                                                                                                                                                                                                                                                                                                        prepro-urotensin II (UII) polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Takahashi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 641; DB 23; Pred. No. 3.1e-62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mori
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             insomnia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'n
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0;
```

```
RESULT 5
AAB60442
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       밁
                                                                                                                                                                                                                                                                                                             Qγ
                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                        Qy
                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                    20
                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                   diagnosis; central nervous
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         neurons, and also has a hypertensive effect. The urotens polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. here).
                                                                                   Rattus
                                                                                                         circulatory function
                                         18-JAN-2001
                                                               WO200104298-A1
                                                                                                                                drug screening;
                                                                                                                                         Urotensin II-like peptide; precursor protein; rat;
                                                                                                                                                              Rat urotensin II-like peptide precursor protein,
                                                                                                                                                                                      24-APR-2001
                                                                                                                                                                                                           AAB60442;
                                                                                                                                                                                                                                 AAB60442 standard; Protein; 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     para-plegia or amyotrophic lateral sclerosis). The polypeptides
are also used to screen for specific inhibitors, i.e. potential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence represents a rat prepro-urotensin II polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   neurodegeneration and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New mammalian urotensin II polypeptide, useful for treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-400075/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (INRM ) INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              02-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200031265-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               In mammals,
                                                                                                                                                                                                                                                                                         121 YCI 123
                                                                                                                                                                                                                                                                                                              121 YCI 123
                                                                                                                                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                      Local
                                                                                                                                                                                                                                                                                                                                                                                       _
                                                                                                                                                                                                                                                                                                                                            GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK
                                                                                                                                                                                                                                                                                                                                 GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK
                                                                                                                                                                                                                                                                                                                                                                              MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV
                                                                                                                                                                                                                                                                                                                                                                                                                            104;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAA46710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Page 30;
                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98FR-0014914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99WO-FR02941
                                                                                                                              sensory epi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coulouarn Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                    84.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42pp; French
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   spinal cord
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 promotes survival and regeneration of motor hypertensive effect. The urotensin II
                                                                                                                   ithelium neuropeptide-like
function; cardiac function
                                                                                                                                                                                                                                                                                                                                                                                                                        Score 541; DB 21;
Pred. No. 2.7e-51;
7; Mismatches 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Jegou S,
                                                                                                                                                                                                                                 A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   injury
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lihrmann
                                                                                                                                                                                                                                                                                                                                                                                                                          12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (e.g. hemi-plegia,
                                                                                                                                                               SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     I,
                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                         SENR ligand
                                                                                                                           receptor;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Vaudry H;
                                                                                                                                                               NO:13.
                                                                                                                                                                                                                                                                                                                                                                                                                        0
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                   120
                                                                                                                                                                                                                                                                                                                                                                             60
                                                                                                                                                                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                                                                                                                                                                        0,
```

08-JUL-1999;

99JP-0194091

06-JUL-2000; 2000WO-JP04484

```
RESULT 6
AAU80121
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                       δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CC or salts, their precursor proteins (AAB60442, AAB60445), and to nucleic CC acids encoding the urotensin II-like peptides (AAF59575-AAF59576, CC AAF59585-AAF59589) or the urotensin II-like peptides protein precursors CC (AAF59584, AAF59584). The urotensin II-like peptides are ijgands of the CC sensory epithelium neuropeptide-like receptor (SENR). The invention also CC relates to vectors and transformants comprising the novel nucleic acid CC sequences, the recombinant production of the rat or mouse urotensin II-CC like peptides or their precursors an antibody against a urotensin II-CC like peptide or precursor, a method of screening for compounds which can modulate the binding of urotensin II-like peptides to the SENR, the CC compounds thus identified, and a method of quantitating urotensin II-like encoding them are useful in study of the physiological effects of CC urotensin II-like peptide/SENR interactions, and for the diagnosis and CC development of drugs (including gene therapy compositions) for modulating CC e.g., central nervous function, cardiac function and circulatory central nervous function, cardiac function and circulatory peptide precursor protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches 104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Urotensin II-like peptide originating in rat or mouse and encoded nucleic acid, useful in study of its physiological effects, for diagnosts and development of drugs for controlling e.g. central nervous
                                                                                                 SENR; Sensory epitheiium neuropeptide-iike receptor; rat; attention deficit disorder; narcolepsy; anxiety; depression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2001-147192/15.
N-PSDB; AAF59574.
                WO200214513-A1
                                                                                                                                                     Rat sensory epithelium neuropeptide-iike receptor (SENR) protein
                                                                                                                                                                                          07-OCT-2002
                                                                                                                                                                                                                                                              AAU80121 standard; Protein; 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to novel rat and mouse urotensin II-like peptide (AAB60443-AAB60444, AAB60446, AAB60449-AAB60452), their amides, esters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ciaim 5; Page 95; 110pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TAKE ) TAKEDA CHEM
                                                 Rattus sp.
                                                                                   schizophrenia;
                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                    121
                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                    YCI 123
                                                                                                                                                                                                                                                                                                                                                                                    YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                     GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                       (first entry)
                                                                                     G
                                                                                   protein-coupled;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               84.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kitada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. 2.7e
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 541; DB 22; Pred. No. 2.7e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mori M;
                                                                                                   depression; insomnia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0,:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0
                                                                                                                                                                                                                                                                                                                                                                                δõ
                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                  В
```

```
RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  This invention relates to an anti-attention deficit disorder or anti-
narcolepsy agent containing a polypeptide with a sequence identical or
substantially similar to a fully defined 12 amino acid sequence given in
the specification, and its amide, ester or their salt. The peptides
have ligand activity to sensory epithelium neuropeptide-like receptor
(SENR) protein. The invention also includes a method for diagnosing
attention deficit disorder, narcolepsy, anxiety, depression, insomnia,
schizophrenia or fear. The polypeptides of the invention, their
precursor proteins and their encoding DNAs are useful in treating
attention deficit disorder or narcolepsy, or for screening drug
candidates for these indications and for anxiety, depression, insomnia,
schizophrenia or fear. They are also useful for gene therapy. The
polypeptide is a G protein-coupled receptor protein, with ligand
activity to sensor epithelium neuropeptide-like receptor. The present
sequence represents the rat sensory endothelium neuropeptide-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Locai
                                                                              Urotensin II; motor neuron; hypertensive; neurodegeneration; spinal cord trauma; hemi-plegia; para-plegia; amyotrophic lateral sclerosis; antihypertensive agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polypeptide GPR12 with iigand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 6: Page 277-278; 290pp; Japanese.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matsumoto Y,
Peptide
                                                Mus sp
                                                                                                                                              Amino acid
                                                                                                                                                                                                                                             AAY93648 standard; Protein; 103 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-AUG-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-FEB-2002
                                                                                                                                                                              25-SEP-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    indications and
                                                                                                                                                                                                                                                                                                                             121 YCI 123
                                                                                                                                                                                                                                                                                                                                                              121
                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                             61
                                                                                                                                                                                                                                                                                                                                                                                                                                                             ᆫ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                          YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                             sequence of murine pro-urotensin II (UII) polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2000JP-0247968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2001WO-JP06899
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watanabe T,
 Location/Qualifiers
1..86
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  for anxiety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Takahashi H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 541; DB 23;
Pred. No. 2.7e-51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mori M;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
```

0;

```
AAY93645
  PD XXX
                                                                                                                                                                                                                                                                                                                  DЪ
                                                                                                                                                                                                                                    δõ
                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                          Query Match
Best Local :
                                                                                                                                                                                                                                                                                   Matches 103;
                                                                                                                                                                                                                                                                                                                                      The present sequence represents a murine pro-urotensin II polypeptide. In mammals, urotensin II promotes survival and regeneration of motor neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-plegia or amyotrophic lateral sclerosis). The polypeptides are useful to screen for specific inhibitors, i.e. potential
                                                                                              spinal cord trauma;
amyotrophic lateral
  02-JUN-2000
                                                                Key
                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                        Claim
                                                                                                                                                                                                                                                                                                                                                                                                                      New mammalian urotensin II polypeptide, useful for treating neurodegeneration and spinal cord injury -
                 WO200031265-A1
                                        Peptide
                                                       Peptide
                                                                               Rattus
                                                                                                                             Amino acid sequence
                                                                                                                                              25-SEP-2000
                                                                                                                                                                            AAY93645 standard;
                                                                                                                                                                                                                                                                                                                                 antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-400075/34.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (INRM ) INST NAT SANTE & RECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     02-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO200031265-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                    61
                                                                                                                                                                                                                                    81
                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                          Local Similarity
                                                                                                                                                                                                                                                                 LPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTP
                                                                                                                                                                                                                   RGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 103
                                                                                                                                                                                                                                   RGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                  LPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTP
                                                                                                                                                                                                                                                                                                                                                                                                        2
                                                                              qs
                                                                                                                                                                                                                                                                                                                                                                                                                                               AAA46720
                                                                                                                                                                                                                                                                                                                                                                                                      Page 32; 42pp; French
                                                                                                     I; motor trauma;
                                                                                                                                                                                                                                                                                                                  103
                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                             (first
                                                                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Coulouarn
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98FR-0014914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-FR02941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= '87..103
                                       /note= "pro-segment"
90..103
                                                              Location/Qualifiers
                                                                                                                                                                            Protein;
                                                                                                                                                                                                                                                                               83.2%; 5c.
100.0%; Pr/
0;
                                                                                           neuron; hypertensive; neurodegeneration; hemi-plegia; para-plegia; sclerosis; antihypertensive agent.
                                                                                                                            of rat pro-urotensin II (UII) polypeptide
                                                                                                                                            entry)
                                "urotensin II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "urotensin II"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "pro-segment"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ۲,
                                                                                                                                                                            103
                                                                                                                                                                                                                                                                                         Score 533;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDICALE
                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                            B
                               peptide"
                                                                                                                                                                                                                                                                               DB 21; L; 1.6e-50; 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lihrmann I,
                                                                                                                                                                                                                                                                                               Length 103;
                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Vaudry H;
                                                                                                                                                                                                                                                                                 0;
                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                   60
                                                                                                                                                                                                                                                                 80
                                                                                                                                                                                                                                                                                 0
                                                                                                                                                                                                                                         RESULT 9
AAB12501
В
                                                                                                                                                                                                                                                                                       8
                                                                                                                                                                                                                                                                                                        Ър
                                                                                                                                                                                                                                                                                                                      Ş
```

```
Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                           30-NOV-1998;
04-FEB-1999;
26-AUG-1999;
                                                                                                                                                                                                                                                                                                                               diagnosis; G pro
kidney disease;
heart function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-pleg para-plegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential
   Mori M,
                                                                                                                                                                                            08-JUN-2000
                                                                                                                                                                                                                                                                                                                                                                                       SENR;
                                                                                                                                                                                                                                                                                                                                                                                                                      Bovine SENR ligand protein sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB12501 standard; Protein;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 2; Page 30-31; 42pp; French.
                                        (TAKE )
                                                                                                                                                         29-NOV-1999;
                                                                                                                                                                                                                                   WO200032627-A1
                                                                                                                                                                                                                                                                        Bos taurus.
                                                                                                                                                                                                                                                                                                         metabolic function; genital function
                                                                                                                                                                                                                                                                                                                                                                                                                                                               27-OCT-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAB12501;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence represents a rat pro-urotensin II polypeptide. In mammals, urotensin II promotes survival and regeneration of moto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New mammalian urotensin II polypeptide, useful for neurodegeneration and spinal cord injury -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WP1; 2000-400075/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Beauvillain J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (INRM ) INST NAT SANTE & RECH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26-NOV-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        82 GSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    62 GSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWKYCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22 PVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTPR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 PVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTVGTEAEGSLGQADPSAETPTPR
                                                                                                                                                                                                                                                                                                                                                                               sensory epithelium neuropeptide-like receptor; urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            85;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
   Abe M,
                                                                                                                                                                                                                                                                                                                         G protein-coupled receptor; hypertension; GPR14; hormone;
ease; regulator; central function; circulatory function;
tion; immune system function; digestive function;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      103 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                             (first entry)
                                                                           98JP-0338984.
99JP-0026848.
99JP-0239367.
                                        CHEM
                                                                                                                                                       99WO-JP06649
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              98FR-0014914
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-FR02941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Coulouarn Y,
   Shimomura Y,
                                        IND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          67.7%;
                                        LTD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 434; DB 21;
Pred. No. 1.1e-39;
6; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jegou S,
Sugo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                        SEQ
   Ŧ,
                                                                                                                                                                                                                                                                                                                                                                                                                          IJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Lihrmann I,
   Kitada
                                                                                                                                                                                                                                                                                                                                                                                                                          NO:29
   с;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vaudry H;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            hemi-plegia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      motor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   81
```

0

```
RESULT 10
AAU80120
ID AAU80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  epithelium neuropeptide-like receptor (SENR), and their amides, esters and salts. SENR is a G-protein coupled receptor protein (also known as GPR14), and the peptides which are ligands for it are forms of the peptide hormone urotensin II. The peptides can be used in the treatment and diagnosis of hypertension and kidney disease, and the development of drugs which are regulators of central functions, circulatory functions,
                        Polypeptide GPR12 with ligand activity to sensor epithelium neuropeptide-like receptor, useful e.g. in treating attention deficit disorder or narcolepsy, or for screening drug candidates for these
                                                                                            WPI; 2002-329576/36
                                                                                                                                                                                                                                                                                                                                                                    SENR; Sensory epithelium neuropeptide-like receptor; attention deficit disorder; narcolepsy; anxiety; dep.
                                                                                                                                                                                                                                                                                                                                                                                                                    Cow sensory epithelium neuropeptide-like receptor (SENR) protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     07-QCT-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Urotensin peptidos which are ligands for sensory epithelium neuropeptide-like receptor (SENR) for diagnosis and treatment of
                                                                                                                                                          (TAKE ) TAKEDA CHEM IND LTD
                                                                                                                                                                                                                          10-AUG-2001; 2001WO-JP06899
                                                                                                                                                                                                                                                                                         WO200214513-A1
                                                                                                                                                                                                                                                                                                                        Bos taurus
                                                                                                                                                                                                                                                                                                                                                     schizophrenia; G protein-coupled; receptor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU80120 standard; Protein; 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      heart functions, immune system functions, digestive functions, mufunctions and genital functions. The present sequence represents bowlne SENR ligand protein from the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present invention provides peptides which are ligands for sensory epithelium neuropeptide-like receptor (SENR), and their amides, ester
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-412287/35
              indications and for anxiety
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 36; Page 140-141; 147pp; Japanese.
                                                                                                                                                                                           10-AUG-2000; 2000JP-0247968
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                121 YCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               _
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  YCV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GAETGEGLRNTDPITNIFYPRGNMRKAFSGQDPKLFLSDLLSRIRKQSKKRGPSSECFWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MYKLVSCCLLFIGSLNPLLSLPVLDSRQESLQL-LAPEDVRSTLDELERASLLQMLPEMS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                           Watanabe T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            48.8%;
52.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ·16; Mismatches
                                                                                                                           Takahashi H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 312.5; DB 2
Pred. No. 2.7e-26;
                                                                                                                           Mori
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41;
                                                                                                                                                                                                                                                                                                                                                                    depression;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length
                                                                                                                                                                                                                                                                                                                                                                                      COW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            122;
                                                                                                                                                                                                                                                                                                                                                                                   fear;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
                                                                                                                                                                                                                                                                                                                                                                      insomnia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         metabolic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1.
```

```
RESULT 11
AAY93639
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                 Urotensin II; motor neuron; hypertensive; neurodegeneration; spinal cord trauma; hemi-plegia; para-plegia; amyotrophic lateral sclerosis; antihypertensive agent.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             attention deficit disorder or narcolepsy, or for screening drug candidates for these indications and for anxiety, depression, is schizophrenia or fear. They are also useful for gene therapy. T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       attention deficit disorder, narcolepsy, anxiety, depression, insorschizophrenia or fear. The polypeptides of the invention, their precursor proteins and their encoding DNAs are useful in treating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      narcolepsy agent containing a polypeptide with a sequence identical or substantially similar to a fully defined 12 amino acid sequence given the specification, and its amide, ester or their salt. The peptides have ligand activity to sensory epithelium neuropeptide-like receptor (SENR) protein. The invention also includes a method for diagnosing
                              02-JUN-2000
                                                                                                                                                              /note= "encoded by GAC" Misc-difference 47
                                                                                                                                                                                       /notem
Misc-difference 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY93639;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY93639 standard; Protein; 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      sequence represents the cow sensory endothelium neuropeptide-like receptor protein of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim
26-NOV-1999;
                                                                                                                                           Misc-difference 81
                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                                                                                                              Amino acid sequence of a human prepro-urotensin II (UII) polypeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              polypeptide is a G protein-coupled receptor protein, with ligand activity to sensor epithelium neuropeptide-like receptor. The pro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       This invention relates to an anti-attention deficit disorder or anti-
                                                             WO200031265-Al
                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                               25-SEP-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          121 YC1 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            YCV 122
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GAETGEGLRNTDPITNIFYPRGNMRKAFSGQDPKLFLSDLLSRIRKQSKKRGPSSECFWK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MYKLVSCCLLFIGSLNPLLSLPVLDSRQESLQL-LAPEDVRSTLDELERASLLQMLPEMS 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      65,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Page 276; 290pp; Japanese
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
99WO-FR02941.
                                                                                                                                                                                                                                      /note= "signal peptide" 21..110
                                                                                                                                                                                                                                                                      Location/Qualifiers
1..20
                                                                                                            114..124
                                                                                            /note=
                                                                                                                         /note= "encoded by ATT"
                                                                                                                                                        note- "encoded by GTA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48.8%;
                                                                                          "urotensin II"
                                                                                                                                                                                                                       "pro-segment of urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 312.5; DB 2
Pred. No. 2.7e-26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 122;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              therapy. The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ţ.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         insomnia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             insomnia,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
```

1;

```
RESULT 12
AAY87319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                                                                      Human; signal peptide-containing protein; HSPP; diagnosis; cancer; inflammation; cardiovascular disease; anticancer; anti-inflammatory; antimicrobial; nootropic; neuroprotective; cardiovascular; hepatotropic; antiasthmatic; gene therapy; cell proliferation; neurological disorder;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       neurons, and also has a hypertensive effect. The urotensin II polypeptides and polynucleotides are useful for treating neurodegeneration and trauma of the spinal cord (e.g. hemi-plegia, para-plegia or amyotrophic lateral sclerosis). The polypeptides are also used to screen for specific inhibitors, i.e. potential
                                                                                                                                                                           cirrhosis; psoriasis; acquired immune deficiency syndrome; anaemia; asthma; Crohn's disease; infection; Alzheimer's disease; schizophrenia; Parkinson's disease; Huntington's diseases; ovulatory defect;
                                                                                                                                                                                                                      antiasthmatic; gene therapy; cell proliferation; neurological direproductive disorder; developmental disorder; arteriosclerosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New mammalian urotensin II polypeptide, useful for treating neurodegeneration and spinal cord injury -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Beauvillain J,
26-JUN-1998;
31-JUL-1998;
                                                                                                                                                                muscular dystrophy.
                                                                                                                                                                                                                                                                                                                  Human signal peptide containing protein HSPP-96 SEQ ID
                                                                                                                                                                                                                                                                                                                                                  11-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antihypertensive agents.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The present sequence represents a human prepro-urotensin II In mammals, urotensin II promotes survival and regeneration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 2; Fig 2; 42pp; French.
                                            25-JUN-1999;
                                                                          06-JAN-2000
                                                                                                       WO200000610-A2
                                                                                                                                   Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                           AAY87319 standard; Protein; 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (INRM ) INST NAT SANTE & RECH MEDICALE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-NOV-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GTEAGESPGEAGPSTETPTPRGSMRK--AFAGONSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2000-400075/34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      62;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAA46698
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Coulouarn Y,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98FR-0014914.
98US-0090762
98US-0094983
                                           99WO-US14484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 286.5; DB 21; Pred. No. 1.9e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Jegou S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lihrmann I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Vaudry H;
                                                                                                                                                                                                                                                                                                                   NO:96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      polypeptide.
of motor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2
```

```
Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EXEXEXED XOX ID
                                                                                                                                                                                                                                                                     Ş
                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                   δÃ
                                                                                                                                                            AAY66707
                                                                                                                                                                             RESULT 13
                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antagonists (potential therapeutic agents). Ab are used to diagnose, monitor, HSPP-related diseases (in usual immunoassays), as therapeut antagonists, in competitive drug screens, and for purification of HS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    diseases, schizophrenia, ovulatory defects, muscular dystrophy). HSPP nucleic acids can be used for the recombinant production of HSPP, for detecting HSPP in standard hybridisation and amplification assays (for diagnosis and monitoring), in gene therapy, as antisense, triplex-forming or ribozyme therapeutics, for detecting related sequences or genetic variations, and for chromosomal mapping. HSPP are also used to raise specific antibodies (Ab) and to screen for agonists and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           reproductive or developmental disorders, (e.g. arteriosclerosis, cirrhosis, psoriasis, acquired immune deficiency syndrome, anaemia, asthma, Crohn's disease, microbial or other infections, congestive or ischaemic heart disease, Alzheimer's, Parkinson's or Huntington's
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       be used in gene therapy. HSPPs can be used to treat or prevent disorders associated with decreased activity or function of HSPP. Antagonists of HSPP are used to treat or prevent disorders associated with increased activity or function of HSPP. Such diseases include cell proliferation decriping to the control of HSPP. Such diseases include cell proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New human signal peptide-containing proteins useful in treatment, prevention and diagnosis of e.g. cancer, inflammation and cardiovascular disease –
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                anticancer, anti-inflammatory, antimicrobial, nootropic, hepatotropic, neuroprotective, cardiovascular and antiasthmatic activities, and can
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1998;
11-DEC-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAZ98109 to AAZ98242 encode AAY87224 to AAY87357 which represent the human signal peptide containing proteins HSPP-1 to HSPP-134. HSPPs ha
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 1; Page 221-222; 327pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N-PSDB; AAZ98204
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2000-160673/14.
                                                                     05-APR-2000
                                                                                                                                          AAY66707 standard; protein; 124 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bandman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Akerblom
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (INCY-) INCYTE PHARM INC
                             Membrane-bound protein PRO1068.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (including cancer), inflammation, cardiovascular, neurological
                                                                                                                                                                                                                                                                       119 WKYCI 123
                                                                                                                                                                                                                                 120 WKYCV
                                                                                                                                                                                                                                                                                                      61 GAERGD1LRKADSSTNIFNPRGNLRKFQDFSGQDPN1LLSHLLARIWKPYKKR-ETPDCF
                                                                                                                                                                                                                                                                                                                                        61 GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                               1 MYKLASCCLLF1GFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                   1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tang
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              lE,
                                                                                                                                                                                                                                     124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               124
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Au-Young
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98US-0112129
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           98US-0102686
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gorgone '
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         44.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GA,
Yue
                                                                                                                                                                                                                                                                                                                                                                                                                                                        19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 286.5; DB 2
Pred. No. 1.9e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ή,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Corley NC,
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Patterson
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Guegler KJ,
son C, Reddy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 21;
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                z
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Baughn MR;
R, Hillman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   therapeutic
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ω
•-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HSPPs have
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              JL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                      2
```

Membrane-bound polypeptide; PRO polypeptide;

LDL receptor;

TIE ligand;

א מימי מים מממממ																																				
24 - JUN-1998; 24 - JUN-1998; 24 - JUN-1998; 24 - JUN-1998; 24 - JUN-1998; 24 - JUN-1998;	24-JUN-1998; 24-JUN-1998; 24-JUN-1998;	23-JUN-1998; 23-JUN-1998; 23-JUN-1998;	22-JUN-1998; 22-JUN-1998;	19-JUN-1998;	19-JUN-1998;	18-JUN-1998;	17-JUN-1998; 18-JUN-1998;	17-JUN-1998;	17-JUN-1998;	17-JUN-1998;	16-JUN-1998; 16-JUN-1998;	16-JUN-1998;	12-JUN-1998;	11-JUN-1998; 11-JUN-1998;	11-JUN-1998;	10-JUN-1998;	10-JUN-1998;	10-JUN-1998;	10-JUN-1998;	10-JUN-1998; 10-JUN-1998;	10-JUN-1998;	10-JUN-1998;	05-JUN-1998; 09-JUN-1998;	05-JUN-1998;	05-JUN-1998;	04-JUN-1998;	04-JUN-1998;	04-JUN-1998;	04-JUN-1998; 04-JUN-1998;	03-JUN-1998;	02-JUN-1998; 02-JUN-1998;	2-JUN-199	02-JUN-1999;	09-DEC-1999.	WO9963088-A2.	Homo sapiens.
98US-0090444. 98US-0090445. 98US-0090461. 98US-0090472. 98US-0090535.	98US-0090429. 98US-0090431. 98US-0090435.	98US-0090349. 98US-0090349. 98US-0090355.	98US-0090246. 98US-0090252.	98US-0089948. 98US-0089952.	98US-00899US. 98US-0089947.	98US-0089907.	98US-0089653. 98US-0089801.	98US-0089599.	98US-0089598.	98US-0089532.	98US-0089512. 98US-0089514.	98US-0089105.	98US-0089090.	98US-0088863. 98US-0088876	98US-0088858. 98US-0088861.	98US-0088826.	98US-0088824.	98US-0088810.	98US-0088741. 98US-0088742	98US-0088738. 98US-0088740. ,	98US-0088734.	98US-0088722.	98US-0088217. 98US-0088655.	98US-0088212.	98US-0088167.	98US-0088033.	98US-0088030.	98US-0088028.	98US-0088021. 98US-0088025.	98US-0087827.	98US-0087609. 98US-0087759.	98US-0087607.	99WO-US12252.			
·										•																										
																					•															
																					•		•													
РЯ ЯЧ ЯЧ ЯЧ		PR PR	PR PR	PR	7.0°	7 7 7 X X X X X X X X X X X X X X X X X		PR	מס	PR:	PR PR	PR PR	אי סיק א קיק	PR	PR PR	מק	マスマス	. PR	PR	PR	PR	PR	אס	PR	אַק איז	ייי	. PR	PR	PR	PR	PR PR	יא	מינ גאס	קר. קר	, מק	מס
26- 31- 16-	26-AUG-199 26-AUG-199 26-AUG-199	26-AUG-199 26-AUG-199 26-AUG-199	24-AUG-199 26-AUG-199	19-AUG-199 20-AUG-199	18-AUG-199 18-AUG-199	. 18-AUG-199	18-AUG-199	17-AUG-199 17-AUG-199	17-AUG-199	17-AUG-199	. 17-AUG-199 17-AUG-199	17-AUG-199 17-AUG-199	17-AUG-199	11-AUG-199	10-AUG-199 11-AUG-199	10-AUG-199	04-AUG-199	04-AUG-199	04 - AUG - 199	04 - AUG - 199	.20-JUL-199	10-JUL-199	07-JUL-199	02-JUL-199	02-JUL-199	02-JUL-199	02-JUL-199	02-JUL-199	01-JUL-199	01-JUL-199	26-JUN-199	R 26-JUN-199	R 25-JUN-199	R 25-JUN-199	25 - JUN - 199	R 25-JUN-199

```
RESULT 14
AAB20118
δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local :
                                                                                                                                                                         antirheumatic; antiarthritic; antiinflammatory; antianaemic;
immunosuppressive; antithyroid; antidiabetic; neuroprotective;
hepatotropic; virucide; dermatological; antipsoriatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           sequences have homology with proteins including LDL receptors, TIE ligands and various enzymes. The membrane-bound proteins and receptor molecules are useful as pharmaceutical and diagnostic agents Receptor Immunoadhesins, for instance, can be used as therapeutic agents to block receptor-ligand interactions. The membrane-bound proteins can also be employed for screening of potential peptide or small molecule inhibitors of the relevant receptor/ligand interaction. The PRO encoding sequences
Modified-site
                             Modified-site
                                                           Protein
                                                                                                                                    Homo sapiens
                                                                                                                                                              antiasthmatic; antiallergic; immunostimulant
                                                                                                                                                                                                                         PRO1068; UNQ525; human; immune d1sease; autoimmune disease;
                                                                                                                                                                                                                                                          Human immunostimulant PRO1068
                                                                                                                                                                                                                                                                                    30-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                 AAB20118 standard; Protein; 124 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   by recombinant techniques.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention provides membrane-bound PRO polypeptides and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 claim 12; Fig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Membrane-bound proteins and related nucleotide sequences
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-072883/06.
N-PSDB; AAZ65047.
                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   polynucleotides encoding them. The PRO sequences of the invention were identified based on extracellular domain homology screening. The PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Wood WI,
                                                                                                                                                                                                                                                                                                                                                                                                                              120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                            119 WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              useful as hybridization probes, in chromosome and gene mapping and in generation of antisense RNA and DNA. PRO nucleic acid sequences 1 also be useful for the preparation of PRO polypeptides, especially
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chen J,
Yuan J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                184; 822pp; English
/note=
92..98
                                                       /label= Signal_peptide
21..124
                                                                                                   Location/Qualifiers
                                        /label= Mature_protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goddard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            43.9%;
         "N-myristoylation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 281.5; DB 21;
Pred. No. 6.7e-23;
Pred. No. 6.7e-23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney AL,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 21; Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Smith V,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe CK;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
••
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The PRO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2
```

Matches Query Match

61;

Conservative

19;

43.9%;

Score 281.5; DB 22; Pred. No. 6.7e-23; Pred. No. 6.7e-23;

DB 22;

Indels Length 124;

ω

Gaps

2

Best Local Similarity

Sequence

124

A

```
allergic diseases (such as asthma, allergic rhinitis, atopic dermatitis, food hypersensitivity and urticaria), immunologic diseases of the lung and transplantation associated diseases (such as graft rejection and graft-versus-host disease) (all claimed). Claimed methods of diagnosing these disorders comprise detecting the level of expression of the PRO gene. Also claimed are a method of identifying a compound capable of inhibiting the expression or activity of the PRO polypeptide, vectors, host cells, antibodies,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cells into a tissue of a mammal, stimulating or enhancing an immune response, or increasing the proliferation of T-lymphocytes in a mammal in response to an antigen. Claimed compositions comprising a PRO polypeptide or its antagonist have the opposite effect. A claimed method for treating an immune related disorder, such as a T cell disorder, involves administering a PRO polypeptide, an agonist antibody or an antagonist antibody. The disorder is selected from
                                                                                                                                                                                                                                                                                                                                                                autoimmune chronic active hepatitis, primary biliary cirrhosis, granulomatous hepatitis, sclerosing cholangitis, inflammatory bowel disease (ulcerative colitis and Crohn's disease), gluten-sensitive enteropathy, whipple's disease, (auto)immune-mediated skin diseases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               database screening. PRO1068 has a mol wt. of 14 kDa and a pI of 8.14. The invention provides polynucleotides (see AAF30050-62) encoding novel human PRO proteins (see AAB20108-20) including PRO1068. Claimed compositions comprising these proteins or their agonists are useful for increasing infiltration of inflammatory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     juvenile chronic arthritis, spondyloarthropathy, systemic sclerosic idiopathic inflammatory myopathy, Sjogren's Syndrome, systemic vasculitis, sarcoidosis, autoimmune haemolytic anaemia, autoimmune thrombocytopaenia, thyroiditis, diabetes mellitus, immune-mediated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New PRO polypeptides, nucleic acids and (ant)agonists, useful diagnosing and treating immune-related disorders, such as mult sclerosis, rheumatoid arthritis and diabetes -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            antibody or an antagonist antibody. The disorder is selected from systemic lupus erythematosus, rheumatoid arthritis, osteoarthritis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ashkenazi AJ, Baker KP,
Hillan KJ, Mark MR, Ma
                                                                                                                                                                                                                                                                                                                      (such as bullous skin disease, erythema multiforme and psoriasis),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      renal disease, demyelinated diseases (such as multiple sclerosis),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present sequence is that of novel human immunomodulator PRO1068
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     N-PSDB; AAF30060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2001-103149/11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WO200105972-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (GETH ) GENENTECH INC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Region
method of PRO1068.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             screening.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fig 22; 127pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               deduced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2000WO-US06884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       99US-0144758
                               stimulating
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note=
64..67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note= "N-myristoylation site"
112..116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118..124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "cell attachment sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         from cDNA (see AAF30060) isolated fi
PRO1068 has a mol.wt. of 14 kDa and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 KP, Fong
Marsters
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "urotensin II signature"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "cAMP- and cGMP-dependent protein kinase phosphorylation site"
                           the proliferation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard A,
, Pitti RM,
                           of T lymphocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Tumas D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Godowski
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          systemic sclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     from a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ΡJ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      eful for multiple
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gurney AL;
anabe CK;
```

```
밁
   Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    D
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB65230
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 15
                                                                                                                                                       24-FEB-2000;
24-FEB-2000;
02-MAR-2000;
                                                   Zhang
                                                            Ferrara N, Fong S, Gerber
Grimaldi CJ, Gurney AL, Ki
Roy MA, Stewart TA, Tumas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             diagnostic assay.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          02-APR-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAB65230 standard; Protein; 124
PRO polynucleotides used to produce polypeptides used to target
                     N-PSDB; AAF44193
                                                                                                                                                                                                                                                                                                                                                                                                                  07-DEC-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                      WO200073454-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human PRO1068 (UNQ525) protein sequence SEQ ID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     . 120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                               30-MAR-2000;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Human; secreted and transmembrane protein; PRO; cytostatic;
                                                                                          Ashkenazi AJ,
                                                                                                               (GETH ) GENENTECH INC.
                                                                                                                                                                                                         11-FEB-2000;
                                                                                                                                                                                                                                                                        30-NOV-I999;
                                                                                                                                                                                                                                                                                                                                                                  23-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                           02-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   _
                               2001-032160/04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             death; cancer; chromosomal mapping; gene mapping; tissue typing;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                     2000WO-US00219.
2000WO-US00376.
                                                                                                                                    2000WO-US07377
                                                                                                                                             2000WO-US05841
2000WO-US06884
                                                                                                                                                                 2000WO-US05004
                                                                                                                                                                            2000WO-US04914
                                                                                                                                                                                     2000WO-US04341.
2000WO-US04414.
                                                                                                                                                                                                         2000WO-US03565
                                                                                                                                                                                                                                                                                                                                                                                               2000WO-US08439
                                                           Baker KP, Botstein D, Desnoyers L, Eaton

ng S, Gerber H, Gerritsen ME, Goddard A,

Gurney AL, Kljavin IJ, Napier MA, Pan J,

rt TA, Tumas D, Watanabe CK, Williams PM,
                                                                                                                                                                                                                                         99WO-US30911
                                                                                                                                                                                                                                                                      99US-0158663
99WO-US28313
                                                                                                                                                                                                                                                                                                                                                               99WO-US12252
99US-0141037
                                                                                                                                                                                                                                                   99WO-US30095
                                                                                                                                                                                                                                                                                          99WO-US21547
                                                                                                                                                                                                                                                                                                      99WO-US21090
                                                                                                                                                                                                                                                                                                                                  9908-0145698
                                                                                                                                                                                                                                                                                                             99US-0149396
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AΑ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NO:266
                                                                                          Eaton
                                                            Paoni NF;
Wood W1;
                                                                                 Godowski PJ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90
```

```
밁
                                                                                                                       õ
                                                                                                                                                              В
                                                                                                                                                                                                    Qγ
                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                   Š
Search completed: March 10, Job time: 30.9189 secs
                                                                                                                                                                                                                                                                                                                                                Query Match
Best Locai
                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                            used to develop and screen therapeutically useful reagents. The PRO nucleotide and protein sequence can be used for tissue typing and in treating cancer. Anti-PRO antibodles can be used in diagnostic assays. AAF44270 to AAF44470 represent PCR primers and hybridisation probes used in the isolation of human PRO sequences. AAF44087 to AAF44269 and AAB65154 to AAB65300 represent human PRO polynucleotide and protein sequences given in the exemplification of the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present invention describes human secreted and transmembrane PRO proteins. The PRO proteins have cytostatic activity. The PRO proteins can be used for targeted delivery of bloactive molecules, such as toxins, radiolabeis or antibodies, that cause ceil death. PRO nucleotic sequences, and their fragments, can be used as hybridisation probes, in chromosomal and gene mapping, and in the generation of anti-sense RNA and DRA. They may also be used to produce transgenic animals which are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bioactive molecules such as toxins, radiolabels or antibodies, to specific cells, to cause targeted cell death -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 12; Fig 184;
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                               120 WKYCV 124
                                                                                                                         119
                                                                                                                                                              61
                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                Local Similarity
                                                                                                                                                                                                                                                _
                                                                                                                                                                                                                                                                  1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                         WKYCI 123
                                                                                                                                                                GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                                                                                                                                                                                     GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                                                                                                                                              MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                                                                                                           6I;
                                                                                                                                                                                                                                                                                                                                                                                                            124 AA;
                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             935pp; English.
                                                                                                                                                                                                                                                                                                                                                43.9%;
                    2003, 17:38:45
                                                                                                                                                                                                                                                                                                                             19;
                                                                                                                                                                                                                                                                                                                                                Score 281.5; DB 22; Pred. No. 6.7e-23;
                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                             42;
                                                                                                                                                                                                                                                                                                                             Indeis
                                                                                                                                                                                                                                                                                                                                                                Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRO nucleotide
                                                                                                                                                                                                                                                                                                                           ω
··
                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ın
                                                                                                                                                                                                                                                                                                                             <u>ب</u>
```

が

```
Database :
                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                 Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                      Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OM protein - protein search, using sw model
                                                                                                                                                                                                                                                               length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                          BLOSUM62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     March 10, 2003, 17:37:08; Search time 11.3027 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                        262574 seqs, 29422922 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 MDRVPFCCLLFIGLLNPLLS.....TRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-831-907A-33
                                                                                                                               Issued_Patents_AA:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.
/cgn2_6/ptodata/2/iaa/backfiles1.pep:*
                   /cgn2_6/ptodata/2/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/2/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/2/iaa/PCTUS_COMB.pep:*
                                                                                   /cgn2_6/ptodata/2/iaa/5B_COMB.pep:*
                                                                                                           /cgn2_6/ptodata/2/iaa/5A_COMB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                  Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (without alignme 320.191 Million
                                                                                                                                                                                                                                                                                                                              262574
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 cell updates/sec
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	00	7	σ	, (Ji	4	· w	N	1	No.	Result	
65.5	66	66	66.5	66.5	66.5	66.5	66.5	66.5	66.5	68.5	68.5	68.5	69.5	72	73.5	73.5	73.5	75	75	75	76	76	195.5	195.5	201.5	201.5	Score		
10.2	10.3	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.4	10.7	- 10.7	10.7	10.8	11.2	11.5	11.5	11.5	11.7	11.7	11.7	11.9	11.9	30.5	30.5	31.4	31.4	Match I	Query	æ
297	546	271	1244	292	292	292	292	292	291	436	436	436	264	6095	1637	1637	1637	966	966.	966	605	605	103	103	139	139	Length D		
2	ω	4	w	U	w	Ν	Ν	N	G	ω	ω	2	4	4	4	4	4	ш	Н	Н	σ	٨	4	ω	4	ω	DB.		
US-09-006-535-4	US-08-935-855-20	US-09-414-436-1	US-08-938-291A-5	PCT-US93-05000-23	US-08-463-772-23	US-08-246-361A-23	US-08-246-361A-6	US-08-464-517-23	PCT-US93-05000-6	US-08-778-423A-4	US-08-778-394-2	US-08-958-642-4	US-08-713-556F-42	US-09-144-085-2	US-09-718-815-2	US-09-718-852-2	US-09-718-692-2	US-08-909-983-2	US-08-909-984A-2	US-08-571-758-2	PCT-US96-07615-1	US-08-472-666-1	US-09-477-071-4	US-09-027-381-4	US-09-477-071-2	US-09-027-381-2	ID		
4, F	20,	μ,	5, 2	23,	23,	23	6	Sequence 23, Appl	φ,	4	2	4,	42,	2	2	2	ν,	'n	2	2	Sequence 1, Appli	μ,	4,	4	,	Sequence 2, Appli	Description		

	45	44	43	42	41	40	39	38	37	36	35	. 34	ω ω	32	31	30	29	28	
)	62	62.5	62.5	62.5	62.5	63	63	63	63	63	64	64	64	64.5	64.5	64.5	64.5	65.5	
	9.7	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	9.8	10.0	10.0	10.0	10.1	10.1	10.1	10.1	10.2	
	247	830	514	501	501	1988	1988	1978	1978	468	1976	1976	763	560	560	560	560	1093	
	4	4	4	ω	Ν	4	ω	4	w	Н	4	ω	Ν	υ	4	ω	ω	ű	
	US-09-157-864-4	US-09-562-737-39	US-08-974-549A-605	US-08-906-791-2	US-08-969-630-4	US-09-425-043-4	US-09-024-020B-4	US-09-425-043-3	US-09-024-020B-3	US-08-459-287-3	US-09-425-043-9	US-09-024-020B-9	US-08-742-753-4	PCT-US94-07644A-2	US-09-063-950-4	US-08-195-006-2	US-08-592-500-2	PCT-US93-03077-1	
	Sequence 4, Appli	Sequence 39, Appl	Sequence 605, App	Sequence 2, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 4, Appli	Sequence 3, Appli	Sequence 3, Appli	Ψ	•	•	•		Sequence 4, Appli	•	Sequence 2, Appli	Sequence 1, Appli	

81-2

ALIGNMENTS

RESULT 1

Sequence 2, Application US/09027381
Patent No. 6075137
GENERAL INFORMATION:
APPLICAME: CHILD. TEFFEREY

APPLICANT: CULP, JEFFREY
APPLICANT: MCNULTY, DEAN
APPLICANT: MCNULTY, DEAN
APPLICANT: BLLIS, CATHERINE
TITLE OF INVENTION: HUMAN UROTENSIN II
NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSE: RATNER & PRESTIA
STREET: P.O. BOX 980
CITY: VALLEY FORGE
STATE: PA
COUNTRY: USA
TID. 17402

ZIP: 19482
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FASTSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/027,381
FILING DATE: 20-FEB-1998

APPLICATION NUMBER: US/09/027,381
FILING DATE: 20-FEB-1998
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/072,383
FILING DATE: 09-JAN-1998
APPLICATION NUMBER: GP-70366-1P
FILING DATE: 04-FEB-1998
ATTORNEY/AGENT INFORMATION:
NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: 23,031
REFERENCE/DOCKET NUMBER: GP-70366

REFERENCE/DOCKET NUMBER: GP-70366
TÉLECOMMUNICATION INFORMATION:
TELEPHONE: 610-407-0700
TELEFAX: 610-407-0701
TELEFAX: 846169

INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LEUNGTH: 139 amino acids
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
MOLECULE TYPE: protein
US-09-027-381-2

Query Match 31.4%; Score 201.5; DB 3; Length 139; Best Local Similarity 43.2%; Pred. No. 2.3e-16;

Š В δÃ

23

Matches

В

```
RESULT 2
US-09-477-071-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-027-381-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 139
; TYPE: PRT
; ORGANISM: HOMO SAPIENS
US-09-477-071-2
                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 4, Application US/09027381 Patent No. 6075137
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SQFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 31.4%; Score 201.5; DB 4; Best Local Similarity 43.2%; Pred. No. 2.3e-16; Matches 51; Conservative 16; Mismatches 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 2, Application US/09477071 Patent No. 6348585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EARLIER APPLICATION NUMBER: 09/027,381
EARLIER FILING DATE: 1998-02-20
EARLIER APPLICATION NUMBER: 60/072,383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: ELLIS, CATHERINE
TITLE OF INVENTION: HUMAN UROTENSIN II
FILE REFERENCE: GP-70366-D2
CURRENT APPLICATION NUMBER: US/09/477,071
CURRENT FILING DATE: 2000-01-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EARLIER FILING DATE: 1998-01-09
EARLIER APPLICATION NUMBER: 60/073,616
EARLIER FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: CULP, JEFFREY APPLICANT: MCNULTY, DEAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQ ID NOS:
                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
  SOFTWARE: FastSEQ for Windows Version 2.0 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: RATNER & PRESTIA
                                                                                                                                                                                                                                                                                                                                 APPLICANT: CULP, JEFFREY
APPLICANT: MCNULTY, DEAN
APPLICANT: ELLIS, CATHERINE
                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION:
                                                                                                                                                        STATE: I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68 PGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI I23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10 LFIGLLNPLLSLPVTD--TGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGES 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          83 LRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCFWKYCV 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 LFIGLINPLISLPVTD--TGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGES 67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             83 LRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCFWKYCV 139
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68 PGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                       STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LCFGHFNSYPSLPLIHDLLLEISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDI 82
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LCFGHFNSYPSLPLIHDLLLEISFQLSAPHEDARLTPEELERASLLQILPEMLGAERGDI 82
                                                                                                                                        19482
                                                                                                                                                                                                   VALLEY FORGE
                                                                                                                                                                                 PΑ
                                                                                                                                                                                                                           P.O. BOX 980
                                                                                                                                                        USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DEAN
                                                                                                                                                                                                                                                                                                                 HUMAN UROTENSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mismatches
                                                                                                                                                                                                                                                                                                                 II
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 139;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ω
--
  Š
                                            Db
                                                                                   οy
                                                                                                                                                                                                                       ; ORGANISM: HOMO SAPIENS US-09-477-071-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     õ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-027-381-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-477-071-4
                                                                                                                                                                                                                                                                                                            SOFTWARE: FastSEQ for Windows Version 3.0 SEQ ID NO 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Matches
                                                                                                                                                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 4, Application US/09477071 Patent No. 6348585
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                  EARLIER FILING DATE: 1998-02-20
EARLIER APPLICATION NUMBER: 60/072,383
EARLIER FILING DATE: 1998-01-09
EARLIER APPLICATION NUMBER: 60/073,616
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/477,071
CURRENT FILING DATE: 2000-01-03
EARLIER APPLICATION NUMBER: 09/027,381
                                                                                                                                                                                                                                                                                                                                                       NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: CULP, JEFFREY
APPLICANT: MCNULTY, DEAN
APPLICANT: ELLIS, CATHERINE
                                                                                                                                                                                                                                                                                                                                                                         EARLIER FILING DATE: 1998-02-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TITLE OF INVENTION: HUMAN UROTENSIN II FILE REFERENCE: GP-70366-D2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                  LENGTH: 103
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS:
LENGTH: 103 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 04-FEB-1998 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: 610-407-0700
                                                                                     15 LNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPS 74
                                                                                                                                  Local Similarity
les 46; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                75 TETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15 LNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPS 74
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRANDEDNESS: single TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELEX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME: PRESTIA, PAUL F
REGISTRATION NUMBER: (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/0 FILING DATE: 09-JAN-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: US/09/027,381 FILING DATE: 20-FEB-1998
75 TETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYC1 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54 TNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCFWKYCV 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                          2 MNPILSICFYSVAP-----HEDARLTPEELERASLLQILPEMLGAERGDILRKADSS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 MNPILSICFYSVAP-----HEDARLTPEELERASLLQILPEMLGAERGDILRKADSS 53
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       846169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           610-407-0701
                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                 30.5%; Score 195.5; DB 4; 41.4%; Pred. No. 8e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30.5%; Score 195.5; DB 41.4%; Pred. No. 8e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GP-70366-1P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/072,383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              23,031
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   4
                                                                                                                         17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GP-70366
                                                                                                                                  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 3;
                                                                                                                                  37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     37;
                                                                                                                                                                          Length 103;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels 11;
                                                                                                                                  Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 103;
                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
```

w ..

δõ д Š

23

Ъ

Ψ

```
Вb
                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                            δÃ
                                                                                                                  PCT-US96-07615-1
                                                                                                                                    RESULT 6
                                                                                                                                                                                 B
                                                                                                                                                                                                                                                                                                                                                                           US-08-472-666-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-472-666-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Вþ
                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
                                                                                Sequence 1, Application PC/TUS9607615 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                            Matches 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                      TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
ORIGINAL SOURCE:
         CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEOUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT APPLICATION DATA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                88
                                                                                                                                                                                                                                       59 VFQGNHLEVFQALEKKAGEEQILNLKRKVLGSSQNSSGSEA---SETPVKRRKSGAKRRL 115
                                                                                                                                                                                                                                                                    35 VLEEDALRALEELERMA----LLQTLRQTMGTEAGESPGEAGPSTETPTPR---GSMRKA 87
                                                                                                                                                                                                                                                                                                                                                                                                       ORGANISM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM PC
OPERATING SYSTEM:
SOFTWARE: PatentI
                                                                                                                                                                                                                                                                                                                                                                                            STRAIN:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME: McDaniels, Patricia A. REGISTRATION NUMBER: 33,194
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Ann-Louise Kerner, Ph.D. ADDRESSEE: Lappin & Kusmer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          54 TNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCFWKYCV 103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ENGTH:
                                                                                                                                                                             FAENEANRVLTPLQVQGEGEGRQ 138
                                                                                                                                                                                                           FAGQNSNTVLSRLLARTRKQHKQ 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01209
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , Application US/08472666 5821048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    l: 605 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MA
                                                                                                                                                                                                                                                                                                                                                                                            BPV-1
                                VENTION: PAPILLOMAVIRUS INFECTION

PRESIDENT AND FELLOWS OF HARVARD COLLEGE

VENTION: PAPILLOMAVIRUS INFECTION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1: Lappin & Kusmer 200 State Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Benson, John D.
Yasugi, Toshiharu
Sakai, Hiroyuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     617-330-1311
                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       'E: Floppy disk
IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Howley, Peter M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                    Bovine papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                617-330-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                      protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  435
                                                                                                                                                                                                                                                                                                                         11.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PAPILLOMAVIRUS-INFECTED CELLS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  METHOD AND KIT FOR DIAGNOSING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/472,666
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            33,194
                                                                                                                                                                                                                                                                                                         16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HAZ-010
                                                                                                                                                                                                                                                                                                                        Score 76; Pred. No.
                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                       E
                                                                                                                                                                                                                                                                                                                                      DB
                                                                                                                                                                                                                                                                                                                                      2; Length 605;
                                                                                                                                                                                                                                                                                                         33;
                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                        10;
                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Вþ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΥ
                                                                                                                                                                                                                                                                                                                                                                                                 US-08-571-758-2
                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PCT-US96-07615-1
                                                                                                                                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                Sequence 2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ouery Match
Best Local :
           SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                            116 FAENEANRVLTPLQVOGEGEGRQ 138
                                                                                                                                         CITY:
STATE:
APPLICATION NUMBER:
                                           COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STATE:
```

```
TELEFAX: 617-330-1311
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                    MOLECULE TYPE:
ORIGINAL SOURCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                               SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                            TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                      CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                              ORGANISM: BOVE.
                          59 VFQGNHLEVFQALEKKAGEEQILNLKRKVLGSSQNSSGSEA---SETPVKRRKSGAKRRL 115
                                                         35 VLEEDALRALEELERMA----LLQTLRQTMGTEAGESPGEAGPSTETPTPR----GSMRKA 87
                                                                                                                                                                                                                                     TOPOLOGY:
                                                                                                                                                                                                                                                                                                                           TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                           REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
                                                                                                                                                                                                                                                                                                                                                            REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE:
                                                                                                                                                                                                                                                                ENGTH:
FAGQNSNTVLSRLLARTRKQHKQ 110
                                                                                           24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01209
                                                                                                        Similarity
                                                                                                                                                                                                                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Boston
                                                                                                                                                                                                                                                                                                                                                                                         Kerner, Ann-Louise
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MA
                                                                                                                                                                                                                                                                605 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            200 State Street
                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 USA
                                                                                                                                                                                                                                  linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IBM PC compatible
                                                                                                                                                                                   Bovine papillomavirus El
                                                                                                                                                                                                                                                                                                                             617-330-1300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lappin & Kusmer
                                                                                                                                                                                                                 protein
                                                                                                        11.9%;
28.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PCT/US96/07615
                                                                                                                                                                                                                                                                                                                                                                         33,523
                                                                                           16;
                                                                                                                                                                                                                                                                                                                                                           HAZ-010PCT
                                                                                                     Score 76; DB 5; Length 605; Pred. No. 1.4;
                                                                                          Mismatches
                                                                                       33; Indels
                                                                                        10;
                                                                                     Gaps
```

GENERAL INFORMATION: APPLICANT: Rubin, COMPUTER READABLE FORM: MEDIUM TYPE: Floppy disk APPLICANT: APPLICANT: Wassarman, David A.
TITLE OF INVENTION: A No. 5700675el Protein Kinase Required for Ras
TITLE OF INVENTION: Signal Transduction
NUMBER OF SEQUENCES: 12 CORRESPONDENCE ADDRESS: APPLICANT: APPLICANT: STREET: 268 BUSH STREET, SUITE 3200 CITY: SAN FRANCISCO ZIP: 94104 COUNTRY: ADDRESSEE: , Application US/08571758 5700675 CALIFORNIA Chang, Henry C. Karim, Felix D. USA Therrien, Marc Rubin, Gerry M. SCIENCE & TECHNOLOGY LAW GROUP

US/08/571,758

FILING DATE: CLASSIFICATION:

```
Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       рь
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-08-571-758-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-08-909-984A-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 2, Appllcation US/08909984A Patent No. 5747275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: B96-
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 343-4341
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (415) 343-43: INFORMATION FOR SEQ ID NO:
                                                                                              TELEFAX: (415) 343-4342 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 BUSH STREET, SUITE 3200
CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Wassarman, David A.
TITLE OF INVENTION: A NO. 5747275el Protein Kinase Required for Ras
TITLE OF INVENTION: Signal Transduction
NUMBER OF SEQUENCES: 12
                                                                                                                                                                         ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: B9
                                                                                                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: (415) 343-4341
                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121 CLARLTTLEQSLRL----SDEEIRQL-LADSPSQREEEEELRRLTRAMQNLRKCMESLESG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              176 TAASNNDPEQWHWDSWDRPTHIHRGSVGNIGLGNNST-----ASPRTHHRQHG 223
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: not
                                                                                                                                                                                                                                                                                                                               COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               66 ESPGEAGP-----STETPT--PRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHG 112
STRANDEDNESS:
TOPOLOGY: no
                                                                                                                                                                                                                                                        CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8 CLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMA-LLQTLRQTM-GTEAG 65
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENGTH:
                                                           ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                94104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   amino acid
                                       amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CALIFORNIA
                                                           966 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chang, Henry C.
Karim, Felix D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Therrien, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (415) 343-4342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Rubin, Gerry M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  not relevant
   not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptide
                                                                                                                                                                                                                                                                                                                                                                                        Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      not relevant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   11.7%; Score 75; DB 30.4%; Pred. No. 3.4;
                                                                                                                                                                                                                                                                                             US/08/909,984A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13;
                                                                                                                                                                             в96-010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             в96-010
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB I; Length 966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7;
```

```
STRANDEDNESS: not rel
TOPOLOGY: not relevar
MOLECULE TYPE: peptide
US-08-909-983-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; MOLECULE TYPE: peptide US-08-909-984A-2
                                                                      Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-08-909-983-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 9
Ş
                                    В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2
Patent No.
                                                                                                                                               Query Match
                                                                                                               Best Local Similarity 30.4 Matches 35; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                            TELEPHONE: (415) 343-4
TELEFAX: (415) 343-434
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS:
ADDRESSEE: SCIENCE & TECHNOLOGY LAW GROUP
STREET: 268 BUSH STREET, SUITE 3200
CITY: SAN FRANCISCO
                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: OSMAN, RICHARD A
REGISTRATION NUMBER: 36,627
REFERENCE/DOCKET NUMBER: B9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn Release #1.0, Version #1.30 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION: A No. 5747288el protein Kinase Required TITLE OF INVENTION: Signal Transduction NUMBER OF SEQUENCES: 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                          TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I76 TAASNNDPEQWHWDSWDRPTHIHRGSVGNIGLGNNST-----ASPRTHHRQHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             121 CLARLTTLEQSLRL----SDEEIRQL-LADSPSQREEEELRRLTRAMQNLRKCMESLESG 175
                                    121 CLARLTTLEQSLRL----SDEEIRQL-LADSPSQREEEELRRLTRAMQNLRKCMESLESG 175
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/0 FILING DATE: I2-JUN-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       66 ESPGEAGP-----STETPT--PRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHG 112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZIP: 94104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STATE: CALIFORNIA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Local Similarity es 35; Conserv
66 ESPGEAGP---
                                                                                                                                                                                                                                                                                  LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8 CLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMA-LLQTLRQTM-GTEAG
                                                                      8 CLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMA-LLQTLRQTM-GTEAG 65

    Application US/08909983
    5747288

                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                  966 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chang, Henry C.
Karim, Felix D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Therrien, Marc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Rubin,
                                                                                                                                                                                                                            not relevant
 ---STETPT--PRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHG 112
                                                                                                                                                                                                                                             not relevant
                                                                                                                                                                                                                                                                                                                                       5) 343-4341
343-4342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerry M
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.7%; Score 75; DB 1; Length 966 30.4%; Pred. No. 3.4;
                                                                                                           11.7%; Score 75; DB: 30.4%; Pred. NO. 3.4; tive 13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           08/571,758
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US/08/909,983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                 в96-010
                                                                                                                                               DB 1; Length 966;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          22;
                                                                                                                 22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for Ras
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     65
                                                                                                                  7,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7;
```

```
δõ
                                                                                                                                                               Вb
                       RESULT 12
US-09-718-815-2
                                                                                             밁
                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                                    ; ORGANISM: Human US-09-718-852-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 11
US-09-718-852-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ; TYPE: PRT
; ORGANISM: Human
US-09-718-692-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
US-09-718-692-2
                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Fas
SEQ ID NO 2
LENGTH: 1637
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: Fas
SEQ ID NO 2
LENGTH: 1637
Sequence 2, Application US/09718815
                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Beraud, Christophe
APPLICANT: Freedman, Richard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 2, Application US/09718852 Patent No. 6426193
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/718,852
CURRENT FILING DATE: 2000-11-22
NUMBER OF SEQ ID NOS: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 2, Application US/09718692
Patent No. 6383796
                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: 1052
CURRENT APPLICATION NUMBER: US/09/718,692
CURRENT FILING DATE: 2000-11-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ATTLE OF INVENTION: No. 6383796el motor proteins and methods for TITLE OF INVENTION: their use
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Beraud, Christophe APPLICANT: Freedman, Richard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
                                                                                515 YSLGASPAAPAFGGS--PASSMEDASEVIRRAKQDLERLKKKEVRQRRKSPE 564
                                                                                                                                                   455 LMSQEANLLLAKAGDGNEAIGALIQNYIREIEELRTKLLESEAMNESLRRSLSRASARSP 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   515 YSLGASPAAPAFGGS--PASSMEDASEVIRRAKQDLERLKKKEVRQRRKSPE 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       455 LMSQEANLLLAKAGDGNEAIGALIONYIREIEELRTKLLESEAMNESLRRSLSRASARSP 514
                                                                                                                69 GEAGPSTETPTPRGSMRKAFAGQNSNTVLSRL---LARTRKQH-KQHGAAPE 116
                                                                                                                                                                                 14 LLNPLLSLPVTDTGERTLQLPVLEEDALRALEE-----LERMALLQTLRQTMGTEAGESP 68
                                                                                                                                                                                                                                 Local Similarity
nes 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          176 TAASNNDPEQWHWDSWDRPTHIHRGSVGNIGLGNNST-----ASPRTHHRQHG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  69 GEAGPSTETPTPRGSMRKAFAGQNSNTVLSRL---LARTRKQH-KQHGAAPE 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14 LLNPLLSLPVTDTGERTLQLPVLEEDALRALEE-----LERMALLQTLRQTMGTEAGESP 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity les 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                     FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                            1052
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  , Richard
No. 6426193el motor proteins and methods for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              their use
                                                                                                                                                                                                                                            11.5%; Score 73.5;
25.0%; Pred. No. 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11.5%; Score 73.5;
25.0%; Pred. No. 10;
                                                                                                                                                                                                                          27; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27; Mismatches
                                                                                                                                                                                                                                                           DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             46;
                                                                                                                                                                                                                          46;
                                                                                                                                                                                                                                                           Length 1637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 1637;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                         Indels 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            223
                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                         4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4.
```

```
B
                                                                                                                          Qy
            밁
                                                                                                                                                                  Db
                                                                                                                                                                                                     Š
                                                                                                                                                                                                                                                                                                                           ; LENGTH: 6095
; TYPE: PRT
; ORGANISM: Sorangium cellulosum
US-09-144-085-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-144-085-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; ORGANISM: Human US-09-718-815-2
                                                                                                                                                                                                                               Query Match
Best Local Similarity
Matches 39; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SOFTWARE: Fas
SEQ ID NO 2
LENGTH: 1637
                                                                                                                                                                                                                                                                                                                                                                                                        SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Julien, Bryan
APPLICANT: Ziermann, Rainer
TITLE OF INVENTION: SORANGIUM POLYKETIDE SYNTHASES AND ENCODING DNA
TITLE OF INVENTION: THEREFOR
FILE REFERENCE: 30062-20020.20
CURRENT APPLICATION NUMBER: US/09/144,085
CURRENT FILING DATE: 1998-08-31
EARLIER APPLICATION NUMBER: 09/010,809
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 2, Application US/09144085 Patent No. 6280999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS: 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Patent No. 6455293
                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Ashley, Gary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Gustafsson, Claes
APPLICANT: Betlach, Mary C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILE REFERENCE: 1052
CURRENT APPLICATION NUMBER: US/09/718,815
CURRENT FILING DATE: 2000-11-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: No. 6455293el motor proteins and methods for TITLE OF INVENTION: their use
                                                                                                                                                                                                                                                                                                                                                                                                                                                               EARLIER FILING DATE: 1998-01-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: Beraud, Christophe APPLICANT: Freedman, Richard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
1795 LQVKEARARVRRRAGKDEPIAIVSMACRLPGGVATPDDYWR 1835
                                                                           1735 GEAVAADQVLKELGLDSLMAVALRNRLTSRTETSLPATLVFDYPTPRAIAELLLKQAFSG 1794
                                                                                                                                                      1679 LFRALLRPSLRKASSATRRDASAL----RERLSALPEAERLNALVELVRGEVAAVAGLQR 1734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           515 YSLGASPAAPAFGGS--PASSMEDASEVIRRAKQDLERLKKKEVRQRRKSPE 564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      455 LMSQEANLLLAKAGDGNEAIGALIQNYIREIEELRTKLLESEAMNESLRRSLSRASARSP 514
                                    91 QNSNTVLSRLLARTRKQH------KQHG--AAPECFWK 120
                                                                                                                                                                                           10 LFIGLINPILSIPVTDTGERTLQLPVLEEDALRALEELERM-ALLQTLRQTMGTEAGESP 68
                                                                                                                            69 GEAGPS-----
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 25.0%; Pred. No. 10 nes 28; Conservative 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               69 GEAGPSTETPTPRGSMRKAFAGQNSNTVLSRL---LARTRKQH-KQHGAAPE 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             14 LLNPLLSLPVTDTGERTLQLPVLEEDALRALEE-----LERMALLQTLRQTMGTEAGESP 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FastSEQ for Windows Version 4.0
                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                            11.2%; Score 72; DB 24.2%; Pred. No. 91;
                                                                                                                                                                                                                                         18; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27; Mismatches
                                                                                                                   -----TET------PTPRG----SMRKAFAG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  10,
                                                                                                                                                                                                                                                                            DB 4; Length 6095
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 4;
                                                                                                                                                                                                                                       50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 1637;
                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11;
                                                                                                                                                                                                                                       54;
                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                   90
                                                                                                                                                                                                                                   7;
```

4.

US-08-713-556F-42

Sequence 42, Appl Patent No. 627797

Application US/08713556F

```
ğ
                                 В
Š
                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                      TELEPHONE: (617) 498-82
TELEFAX: (617) 876-5851
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 07/965,662
FILING DATE: 23-0CT-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/112,608
FILING DATE: 26-AUG-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 536 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                      TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 25-APR-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER:
                                                                                                                                                                                    TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: PCT/US93/10168 FILING DATE: 22-OCT-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 87 CAMBRIDGE
                                                                                                                                                                                                                                                                                                                                                                        NAME: BROWN, SCOTT A. REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 08/235,398 FILING DATE: 28-APR-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
 56
                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                   Local
                                                                                                                                                                                                                       STRANDEDNESS:
                                                              4 VPFCCLLEIGLLNPLLSLPVTDT----GERTLQLPVLEEDALRA--LEELERMALLQT-- 55
                                                                                                                                                                                                                                                      ENGTH:
 ---LRQTMGTEAGESPG---
                                 MPLQLLLLLLLLGPGNSLQLWDTWADEAEKALG-PLLARDRRQATEYEYLDYDFLPETEP 59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            02140
                                                                                                                   Similarity
                                                                                                                                                                                                                                     amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ¥
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E: LEGAL AFFAIRS
87 CAMBRIDGEPARK DRIVE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Shaw, Gray
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Veldman, Geertruida
Cumming, Dale
                                                                                                                                                                                                                                                        264 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kumar,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chang, Xiao Jia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sako, Dianne
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Larsen,
                                                                                                    Conservative
                                                                                                                                                                                                      linear
                                                                                                                                                                                                                                                                                                                                                                                                                       ЛИМВЕR: US 08/428,734
25-APR-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         30-SEP-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ravindra
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Glenn
                                                                                                                                                                                                                                                                                                                        498-8224
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NOVEL P-SELECTIN LIGAND PROTEIN
                                                                                                                     10.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      us 08/316,305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US/08/713,556F
                                                                                                                                                                                                                                                                                                                                                                      32,724
                                                                                                     15;
                                                                                                                   Score 69.5;
Pred. No. 2
                                                                                                                                                                                                                                                                                                                                                          5213F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               z
                                                                                                    ed. No. 2.7;
Mismatches
 ---EAGPSTETPTPRGSMRKAFAGQNSNTVLSR 99
                                                                                                                                    DB 4; Length 264;
                                                                                                     42;
                                                                                                     Indels
                                                                                                    33;
                                                                                                     Caps
```

```
밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
US-08-958-642-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
   망
                               20
                                                                 밁
                                                                                               Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4,
                                                                                                                                  Matches
                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                             FILING DATE: December 31, INFORMATION FOR SEQ ID NO: 4: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                 MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               113 SLLADTRQ 120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               100 -LLARTRK 106
188 QDGCQQQEGGENTNSISSNGEDSDEAQMRLQLKRKLQRNRTSFTQ 233
                                                               130 NIPSVSSINRVLRNLASEKQQMGADGMYDKLRMLNGQTGSWGTRPGWYPGTSVPG--QPT 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60
                                                                                             20 SLPVTDTGERTLOLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPT 79
                                                                                                                                                 Local Similarity
                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC OPERATING SYSTEM:
                                 80 PRGSMRKAFAGQNSNTV------LSRLLARTRKQHKQ 110
                                                                                                                                                                                                                                   TOPOLOGY:
                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Release #1.0, Version #1.30 (EPO)
                                                                                                                                                                                                                                                                LENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PEMLRNSTDTTPLTGPGTPESTTVEPAARPPPGPPRVSPDPRAEL------DSTVLLTR 112
                                                                                                                                  24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 , Application US/08958642 5948623
                                                                                                                                                                                                                                               : 436 amino acids
amino acid
                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                IBM PC compatible
SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                   linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Floppy disk
                                                                                                                                                 10.7%;
22.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NOVEL METHOD FOR TESTING THE DIFFERENTIATION STATUS IN PANCREATIC CELLS OF A MAMMAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16
                                                                                                                                                                                                                                                                                                                  08/778,423
er 31, 1996
                                                                                                                                                                                                                                                                                                                                                                                  US/08/958,642
                                                                                                                                    18;
                                                                                                                                              Score 68.5; D
Pred. No. 6.9;
                                                                                                                                    Mismatches
                                                                                                                                                                    DB 2;
                                                                                                                                    47;
                                                                                                                                                                    Length 436;
                                                                                                                                     17;
                                                                                                                                    Gaps
                                                                                                                                     ν,
```

Search completed: March 10, 2003, 17:48:15 Job time : 14.3027 secs

7 :

GenCore version 5.1.3 Copyright (c) 1993 - 2003 Compugen Ltd

```
Database
                                                                                                                                                                                                                                                                                                                                                                                                                         Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  length: 0
length: 2000000000
                       10:
11:
12:
13:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                March 10, 2003, 17:38:48; Search time 9.64054 Seconds (without alignments) 538.033 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          188354 seqs, 42170167 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 MDRVPFCCLLF1GLLNPLLS.....TRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-09-831-907A-33
641
                                                                                                                                                                                                                                                                                                                                                                     Published_Applications_AA:*
//gn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US08_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US06_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US07_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US07_PUBCOMB.pep:*
//gn2_6/ptodata/1/pubpaa/US08_PUBCOMB.pep:*
//gn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US09_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
//gn2_6/ptodata/1/pubpaa/US10_NEW_PUB.pep:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        188354
```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

æ	
	1
SUMN	
UMMAR1ES	-
	2001
	The second section of the second seco

19	18	17	Lo	· L	14	نا د	12	11	10	,	000	,	σ		4. 1) V	ــ د	1	NO.	Result
281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	201.0	001.0			Score	
43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	•		43.9			43.9	43.9	43.9	43.9	4.5.9	45.7		_	Ouery
124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	124	125		Length	
10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	10		DB	
US-09-989-722-266	US-09-989-726-266	US-09-990-711-266	US-09-997-666-266	US-09-997-428-266	US-09-990-562-266	US-09-990-438-266	US-09-993-667-266	US-09-997-653-266	US-09-989-734-266	US-09-993-687-266	US-09-991-181-266	US-09-990-436-266	US-09-989-730-266	US-09-990-444-266	US-09-989-735-266	US-09-989-293A-266	US-09-992-598-266	US-09-854-105-2		ID	
, ,	2000	200,	200	2000	266		2000) NO.) i)))))	200)))))	266	266	266	266	266,	Sequence 2, Appli	הפאלדוקרוטוו	700000000000000000000000000000000000000	
App	י כ	י כ	י כ	י כ	י כ	סי כ	י ל	י ל	י ל	י כ	י כ	י כ	י כ	י כ	י כ	ο,	Ö	1	•		

Sequence 266, Application US/09992598 Patent No. US20020160384A1

45	44	43	4.2	41	40	. u) W	37	36	ر ا ا	4 1	ه رر د) (L	ى ر <u>.</u>											20
64	64.5	64.5	65	65.5	ου . υ	65.5	05.5	66	70	70.5	71	13	α υ υ	99	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5	281.5
10.0	10.1	10.1	10.1	10.2	10.2	10.2	10.2	10.3	10.9	11.0	11.1	11.4	13.3	13.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9	43.9
238	568	560	178	1033	950	448	434	491	1478	315	208	596	256	2249	124	124	124	124	124	124	124	124	124	124	124
9		10			10	10	10					10				10	10	10	10	10	10	10	10	10	10
US-09-738-626-6690	US-10-173-519-2	US-09-782-980-61	US-09-764-868-792	US-09-820-843A-75	US-09-823-356-9	US-09-815-242-10651	US-09-815-242-4987	US-10-114-893-69	US-09-801-368-52	US-09-925-301-1053	US-09-738-626-6261	US-09-797-039-8	US-09-867-550-684	US-09-866-557A-4	US-09-989-721-266	US-09-990-456-266	US-09-993-604-266	US-09-991-163-266	US-09-990-442-266	US-09-991-073-266	US-09-989-732-266	US-09-989-731-266	US-09-989-727-266	US-09-989-279-266	US-09-989-723-266
Sequence 6690, Ap	Sequence 2. Appli	Sequence 61 Appl	Sequence 792. App	Sequence 75. Appl	Sequence 9, Appli	Sequence 10651, A	Sequence 4987. An	Sequence 69, Appl	Sequence 52. Appl	Sequence 1053 An	Sequence 6261. An	Sequence 8, Appli	Sequence 684, App	Sequence 4, Appli	Sequence 266, App	Sequence 266, App	Sequence 266, App	Sequence 266, App	Sequence 266. Ann	Sequence 266. App		266.	266		Sequence 266, Ann

ALIGNMENTS

```
RESULT 2
US-09-992-598-266
                                                                                   Ъ
                                                                                                                        QΥ
                                                                                                                                                                 В
                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                  Qy
                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 125
; TYPE: PRT
; ORGANISM: MACACA FASCICULARIS
US-09-854-105-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-09-854-105-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/854,105
CURRENT FILING DATE: 2001-05-11
PRIOR APPLICATION NUMBER: 60/203,470
PRIOR FILING DATE: 2000-05-11
NUMBER OF SEQ 1D NOS: 2
SOFTWARE: FastSEQ for Windows Version 3.0
SEQ 1D NO 2
                                                                                                                                                                                                                                                                                                                Query Match 45.7%; Score 293; DB 10; Best Local Similarity 50.8%; Pred. No. 1.9e-23; Matches 64; Conservative 19; Mismatches 39;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 2, Application US/09854105
Patent No. US20020058323A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Shabon, Usman TITLE OF INVENTION: MONKEY UROTENSIN 1I FILE REFERENCE: GP-70694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Elshourbagy, Nabil APPLICANT: Shabon, Usman
                                                                               120 FWKYCV 125
                                                                                                                      118 FWKYCI 123
                                                                                                                                                 61 LGAERGDSLRKADSSTNIFNPRGNLRKFQDFSGQDPD1LLSHLLAR1RKPYKKR-ETPDC 119
                                                                                                                                                                         1 MYKLASCCLLF1GFLNPLFSLPLLDSGEVSLQLSAPHEDAPLTSEELERASLLQILPEML 60
                                                                                                                                                                                                                                                     1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTL-RQT 59
                                                                                                                                                                                                                                                                                                                                                       Length 125;
                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                4,
                                                                                                                                                                                                                                                                                                          Gaps
```

ω

```
GENERAL INFORMATION:
APPLICANT: Ashkenaz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/992,598
CURRENT F1LING DATE: 2001-11-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                           PRIOR
PRIOR
                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING DATE: 1997-06
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1997-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            \PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   \PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             \PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPL1CANT:
                                                                                                                                           PRIOR
PRIOR
                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT
                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                        RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PPLICANT
                                                         PRIOR
                                                                                                                                                                        PR1OR
                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                      RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT
                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1997-1:
                          FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/088030
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/
FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/065311
                APPLICATION NUMBER:
                                                                       APPLICATION NUMBER:
                                                                                                  F1LING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                               APPLICATION NUMBER:
                                                                                                                                             FILING DATE:
                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                             FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                   FILING DATE:
                                                                                                                                                                                      APPLICATION NUMBER:
FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ashkenazl, Avl J.
Baker, Kevln P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Godowsk1, Paul J.
Grlmaldi, J. Chrlstopher
Gurney, Austln L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Botstein,Davld
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerrltsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gorber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Williams,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Paoni, Nicholas F.
DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER: 60/062250
1997-10-17
                                                                                                                                                                                                                                                                                                                                                  1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                        1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                               1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1997-06-16
                                                                                                               1998-06-04
                                                                                                                                             1998-06-04
                                                                                                                                                                        1998-06-04
                                                                                                                                                                                                                                 1998-06-02
                                                                                    1998-06-04
                                                                                                                                                                                                     1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-02-25
1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/065186
                                                                                                                                                           60/088025
                                                                                                                                                                                                                 60/087827
                                                                                                                                                                                                                                             60/087759
                                                                                                                                                                                                                                                                          60/087609
                                                                                                                                                                                                                                                                                                      60/087607
                                                                                                                                                                                                                                                                                                                                  60/087106
                                                                                                                                                                                                                                                                                                                                                                                         60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                     60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ħ
                60/088033
                                                                                                   60/088028
                                                                                                                               60/088026
                                                                                                                                                                                        60/088021
                                                                       60/088029
```

```
PRIOR APLING ...

PRIOR APPLICATION ...

PRIOR APPLICATION NUMBER: 6(PRIOR APPLICATION NUMBER: 1998-06-TOR FILING DATE: 1998-06-TOR FILING DATE: 1998-07-TOR FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                        PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RIOR
                                                                                                                                                                          OR FILING DATE: 1998-06;
R APPLICATION NUMBER: ()
OR FILING DATE: 1998-06
OR APPLICATION NUMBER: ()
OR APPLICATION NUMBER: ()
OR FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/088167 FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089598 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                        APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                      APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER
APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-17
                                                                                                                                                                                                                                                          момвек: 60/089952
1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER: 60/089600
1998-06-17
                                                                                                                                                                                                                                                                                                                                                           1998-06-19
                                                                                                                                                                               1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-17
  1998-06-24
                                             1998-06-23
                                                                                        1998-06-23
                                                                                                                                                                                                                          1998-06-22
                                                                                                                                                                                                                                                                                                                  1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-11
                                                                                                                                   1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                         .998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/088738
                                                                                                                                                          60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/088858
                         60/090429
                                                                                                               60/090349
                                                                                                                                                                                                   60/090252
                                                                                                                                                                                                                                                                                                                                     60/089948
                                                                                                                                                                                                                                                                                                                                                                                    60/089947
                                                                                                                                                                                                                                                                                                                                                                                                                             60/089908
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/089907
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089105
                                                                    60/090355
                                                                                                                                                                                                                                                 60/090246
```

```
RESULT 3
US-09-989-293A-266
; Sequence 266, Application US/09989293A
                                                                                                 QΥ
                                                                                                                               Вb
                                                                                                                                                       δÃ
                                                                                                                                                                                                             Ş
                                                                           밁
                                                                                                                                                                                    В
                                                                                                                                                                                                                                                    Query Match
Best Local S
                                                                                                                                                                                                                                        Matches
                                                                        120 WKYCV 124
                                                                                                    119
                                                                                                                               61
                                                                                                                                                          61
                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091982
FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091978
                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091478 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                           FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-0
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090542 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                       GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                   WKYCI 123
                                                                                                                                               GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION FILING DATE
                                                                                                                                                                                                                                     61; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 998-06-24
                                                                                                                                                                                                                                                  43.98;
                                                                                                                                                                                                                                                                                                                                                                                                                       60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090431
                                                                                                                                                                                                                                     19;
                                                                                                                                                                                                                                   Score 281.5; DB Pred. No. 3e-22; 9; Mismatches
                                                                                                                                                                                                                                                               DB 9;
                                                                                                                                                                                                                                    42;
                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                             Length 124;
                                                                                                                                                                                                                                   ω
••
```

Gaps

2

```
Patent No. GENERAL IN
                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
APPLICANT:
                                                                                                                                                           PRIOR
PRIOR
                                                                                                                                                                                         PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/989,293A CURRENT FILING DATE: 2001-11-20 PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-06-16 PRIOR APPLICATION NUMBER: 60/062250 PRIOR APPLICATION NUMBER: 60/062250 PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                    PRIOR
                                                                                                                                PRIOR
                                                                                                                                                PRIOR
                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/065186 PRIOR FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transme
TITLE OF INVENTION: Acids Encoding the
FILE REFERENCE: P2730P1C66
                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT:
OR APPLICATION NUMBER: 60/0
R FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/0
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/0
OR FILING DATE: 1998-06-04
OR APPLICATION NUMBER: 60/0
OR FILING DATE: 1998-06-04
                                                                                                                           FILING DATE: 1998-0
APPLICATION NUMBER:
FILING DATE: 1998-0
                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                     FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                        FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-05-28 APPLICATION NUMBER: 60/087607
                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-05
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-02-25
APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    US20020177164A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ashkenazi,Avi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gurney, Austin L
Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Baker,Kevin P.
Botstein,David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ferrara,Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       William I.
                                                                                                                             1998-06-04
                                                                                                                                                                                                                                                                               1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                          1998-04-28
                                                                                                                                                         1998-06-04
                                                                                                                                                                                         1998-06-04
                                                                                                                                                                                                                      1998-06-03
                                                                                                                                                                                                                                                  1998-06-02
                                                                                                                                                                                                                                                                                                                1998-06-02
                                                                                                                                                                                                                                                                                                                                                                            1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Daniel
                                                 60/088030
                                                                               60/088029
                                                                                                           60/088028
                                                                                                                                                                         60/088025
                                                                                                                                                                                                      60/088021
                                                                                                                                                                                                                                  60/087827
                                                                                                                                                                                                                                                                                                60/087609
                                                                                                                                                                                                                                                                                                                                                           60/087106
                                                                                                                                                                                                                                                                                                                                                                                         60/084600
                                                                                                                                                                                                                                                                                                                                                                                                                          60/083322
                                                                                                                                         60/088026
                                                                                                                                                                                                                                                                  60/087759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Transmembrane Polypeptides ing the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nucleic
```

```
PRIOR
PRIOR
                                                                                                                                        PRIOR
                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
              PRIOR
                                                                                   PRIOR
                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                 PRIOR
                                                                                                                                                        PRIOR
                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/
FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/
FILING DATE: 1998-06-11
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: ETLING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/088655 FILING DATE: 1998-06-09 APPLICATION NUMBER: 60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/088738 FILING DATE: 1998-06-10
                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                          APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-(
APPLICATION NUMBER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 6 FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088326 FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
APPLICATION NUMBER: FILING DATE: 1998-06
                                         APPLICATION NUMBER:
                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-06-22
                                                                                 FILING DATE: 1998-06-22
                                                                                                 APPLICATION NUMBER: 60/090252
                                                                                                              FILING DATE: 1998-06-
                                                                                                                             FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-05
                                                                                                                                                                      1998-06-19
                                                                                                                                                                                                                                                                                     1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-05
                                                                                                                                                                                                                                                                                                                                           1998-06-17
                                                                                                                                                                                                                                                                                                                                                                       1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-16
                         1998-06-23
                                                                                                                                           1998-06-19
                                                                                                                                                                                                 1998-06-19
                                                                                                                                                                                                                                                                                                                1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-05
998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/089532
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                          60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088167
                                                                    60/090254
                                                                                                                             60/090246
                                                                                                                                                        60/089952
                                                                                                                                                                                                              60/089947
                                                                                                                                                                                                                                          806680/09
                                                                                                                                                                                                                                                                      60/089907
                                                                                                                                                                                                                                                                                                                             60/089653
                                                                                                                                                                                                                                                                                                                                                        60/089600
                                                                                                                                                                                                                                                                                                                                                                                    60/089599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/088824
              60/090355
                                        60/090349
                                                                                                                                                                                   60/089948
                                                                                                                                                                                                                                                                                                  60/089801
                                                                                                                                                                                                                                                                                                                                                                                                               60/089598
```

```
Ş
                                                                       Ş
                                                                                                                         Ωy
망
                                                 밁
                                                                                                 DЬ
                                                                                                                                                 Best Local
Matches 6
                                                                                                                                                                          Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                        PRIOR
                        119 WKYCI 1.23
120 WKYCV 124
                                                 61
                                                                          61
                                                                                                  ب
                                                                                                              1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLOLPVLEEDALRALEELERMALLOTLROTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
FILING DATE: 1998-00
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                         FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                   FILING
                                                                                                                                                                                                                APPLICATION
                                                                                                                                                                                                                            FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                            FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION 'NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                GAERGDILRKADSSTNIFNPRGNLRKFODFSGODPNILLSHLLARIWKPYKKR-ETPDCF
                                                                        GTEAGESPGEAGPSTETPTPRGSMRK--AFAGONSNTVLSRLLARTRKOHKOHGAAPECF 118
                                                                                                  MYKLASCCLLFTGFLNPLLSLPLLDSREISFOLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                   61;
                                                                                                                                                               Similarity
                                                                                                                                                                                                   DATE:
                                                                                                                                                   Conservative
                                                                                                                                                                                                                NUMBER: 60/092182
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                    1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                               43.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090435
                                                                                                                                                                                                                                       60/091982
                                                                                                                                                                                                                                                                 60/091978
                                                                                                                                                                                                                                                                                                                   60/091626
                                                                                                                                                                                                                                                                                                                                           60/091519
                                                                                                                                                                                                                                                                                                                                                                   60/091544
                                                                                                                                                                                                                                                                                                                                                                                           60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                  60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090863
                                                                                                                                                    19;
                                                                                                                                                               Score 281.5; DB 9; Pred. No. 3e-22;
                                                                                                                                                   Mismatches
                                                                                                                                                   42;
                                                                                                                                                                          Length
                                                                                                                                                    Inde1s
```

124; ω ••

Gaps

2

60

RESULT 4 US-09-989-735-266

```
Sequence 200.
Publication No. US20.
Publication No. HS20.
Publication No. HS20.
Pashkenazi
                                                                                                                                                                            PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/09/989,735
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Ashkenazi, Avi J.
APPLICANT: Baker, Kevin P.
APPLICANT: Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                             APPLIANTE: 1998-0, FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/0
APPLICATION 1998-06-03
                           FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                           APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                          FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                      APPLICATION NUMBER: 60/0
FTILING DATE: 1998-06-04
                                                                                                                                             APPLICATION
                                                                                                                                                          APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/087609
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/1 FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/062250 FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/083322 FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimaldi, J.Christopher Gurney, Austin L. Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gerritsen, Mary E
Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Roy, Margaret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Paoni,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Application US/09989735
b. US20020193299A1
                                                                                                                                             NUMBER:
                NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      , Nicholas F.
Margaret Ann
rt, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Daniel
                                                                                                                                                                                                                                                                                                                                                                                                     60
                                            60/088030
                                                                                                                                          60/088026
                                                                                                                                                                         60/088025
                                                                                                                                                                                                                                                                        60/087759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/075945
                                                                           60/088029
                                                                                                          60/088028
                                                                                                                                                                                                                                       60/087827
                                                                                                                                                                                                                                                                                                                                                                    60/087106
                                                                                                                                                                                                        60/088021
                                                                                                                                                                                                                                                                                                                                     60/087607
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/065186
                                                                                                                                                                                                                                                                                                                                                                                                    /084600
                                                                                  PRIOR
PRIOR
                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                PRIOR
PRIOR
                                                                                                                 PRIOR APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR PRIOR
                                                                     PRIOR
                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRĮOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PR10R
                                                                                                                                                                                                                                                                                                                DR AFFLICATION

DR EILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/089600

OR FILING DATE: 1998-06-17

OR APPLICATION NUMBER: 60/089653

FOR FILING DATE: 1998-06-17

IOR APPLICATION NUMBER: 60/089801

TOR FILING DATE: 1998-06-18

OR FILING DATE: 1998-06-18
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-23
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-23
                                                           FILING DATE: 1998-06-22
APPLICATION NUMBER: 60/090254
FILING DATE: 1998-06-22
                                                                                                                                               FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                              FILING DATE: 1998-06-19
APPLICATION NUMBER: 60/089948
FILING DATE: 1998-06-19
                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/089907 FILING DATE: 1998-06-18
                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/089908 FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/089599 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-11
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/089598 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DATE: 1998-06-04
   NUMBER: 60/090355
: 1998-06-23
                                                                                                                 NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER:
                                                                                                                                1998-06-22
                                                                                                                                                               1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ЛИВЕR: 60/089532
L998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-09
                                                                                                               60/090252
                                                                                                                                             60/090246
                                                                                                                                                                              60/089952
                                                 60/090349
                                                                                                                                                                                                                                            60/089947
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088167
```

```
Š
                                                             В
                                                                                          δÃ
                                                                                                                             В
                                                                                                                                                          δÃ
В
                                                                                                                                                                                             Best Local Similarity Matches 61; Conserv
                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                PRIOR
120
                               119 WKYCI 123
                                                                                             61
                                                               61
                                                                                                                                                               \vdash
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-0
APPLICATION NUMBER:
FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090542
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090429 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-0
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/092182
                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                          MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                             GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                               MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
WKYCV 124
                                                               GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF
                                                                                                                                                                                                                                                                DATE:
                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-
                                                                                                                                                                                                                                                                1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                  1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-07-02
                                                                                                                                                                                                              43.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                60/091626
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/091478
                                                                                                                                                                                                                                                                                                               60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /090431
                                                                                                                                                                                              Score 281.5; Pred. No. 3e-; 19; Mismatches
                                                                                                                                                                                                               .5; DB
3e-22;
                                                                                                                                                                                                42;
                                                                                                                                                                                                                              9
                                                                                                                                                                                                Indels
                                                                                                                                                                                                                              Length 124;
                                                                                                                                                                                                ω
••
```

RESULT 5

Gaps

2

60

```
US-09-990-444-266; Sequence 266, Apr.; Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/09/990,444
CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Secreta TITLE OF INVENTION: Acids FILE REFERENCE: P2730PlC19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPL1CANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                           PRIOR
                                                                                        PRIOR
                                                                                                                   PRIOR
                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                       PRIOR
                                                                                                                                    PRIOR
                                                                                                                                                                 PRIOR
                                                                                                                                                                                PRIOR
                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                             PRIOR FILING DATE: 1998-04-28 PRIOR APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                           PRIOR FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                         RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                      RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR FILING DATE: 1997-11-12
                              PRIOR
                                                                          PRIOR
                                                                                                                                                                                                                                                      FILING DATE: 1998-05-28
APPLICATION NUMBER: 60/087607
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087609
                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                         FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/087106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/066770
                            FILING DATE:
                                            FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                         FILING DATE: 1998-01 APPLICATION NUMBER:
                                                                                                      FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ashkenazi, Avi J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Paoni, Nicholas F. Roy, Margaret Ann Stewart, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Baker, Kevin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Zhang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Application US/09990444
o. US20020193300A1
DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pan, James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Napier, Mary A.
               NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Daniel
                               1998-06-04
                                                           1998-06-04
                                                                                                                                                   1998-06-04
                                                                                                                                                                                1998-06-03
 1998-06-04
                                                                                         1998-06-04
                                                                                                                      1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Secreted and Transmembrane Polypeptides and Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                      997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             סי
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 <u>د</u>،
                                                                                                                                                                                                                                                                                                                                                                             60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/062250
                60/088030
                                            60/088029
                                                                          60/088028
                                                                                                                                    60/088025
                                                                                                                                                                 60/088021
                                                                                                                                                                                              60/087827
                                                                                                                                                                                                                           60/087759
                                                                                                                                                                                                                                                                                                                                               60/084600
                                                                                                       60/088026
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Nucleic
```

PRIOR

APPLICATION NUMBER: 60/088212

1998-06-05

60/088655 60/088217 1998-06-05

NUMBER:

1998-06-04 1998-06-04

60/088326 60/088167 /088202

NUMBER: 60/088033

```
Ъ
  В
                       QΥ
                                                                           Ş
                                                                                                       В
                                                                                                                              Š
                                                                                                                                                       Query Match
Best Local S
Matches 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION NUMBER: 60/090435 PRIOR FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR APPLICATION NUMBER: 60/
PRIOR FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                         119
120 WKYCV
                                           61 GAERGDILRKADSSTNIFNFRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF
                                                                           61
                                                                                                                                                                                                                                                                                                                                                                                                                                                         R FILING DATE: 1998-06
R APPLICATION NUMBER: 1998-06
R FILING DATE: 1998-06
R APPLICATION NUMBER: 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           R FILING DATE:
R APPLICATION N
R FILING DATE:
                                                                                                                                                                                                         APPLICATION NUMBER: 60/092182 FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091626
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/
FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-26 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090695
APPLICATION NUMBER: 60/090695
APPLICATION NUMBER: 60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06
APPLICATION NUMBER:
                                                                                           FILING DATE:
                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                      FILING DATE: 1998-07-
                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/090678
               WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090535
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-0
APPLICATION NUMBER:
                                                                  GTEAGESPGEAGPSTETPTPRGSMRK--AFAGONSNTVLSRLLARTRKOHKOHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                       61;
                                                                                                                                                                 Similarity
 124
                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NUMBER:
                                                                                                                                                                                                                                  1998-07-07
                                                                                                                                                                                                                                                             1998-07-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .998-06-24
                                                                                                                                                                 43.9%;
                                                                                                                                                                                                                                                                                                  60/091633
                                                                                                                                                                                                                                                                       60/091978
                                                                                                                                                                                                                                              60/091982
                                                                                                                                                                                                                                                                                                                                                   60/091519
                                                                                                                                                                                                                                                                                                                                                                              60/091544
                                                                                                                                                                                                                                                                                                                                                                                                                                 60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090429
                                                                                                                                                     19;
                                                                                                                                                  Score 281.5; DB Pred. No. 3e-22; Mismatches
                                                                                                                                                                              DB
                                                                                                                                                   42;
                                                                                                                                                                           9;
```

PRIOR PRIOR

PRIOR

FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-11

60/088876 60/088861 60/088858

APPLICATION NUMBER: 60/089105

FILING DATE: 1998-06-12

PRIOR

PRIOR

APPLICATION NUMBER: 60/089532 FILING DATE: 1998-06-17

APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: 1998-06-16 APPLICATION NUMBER: APPLICATION NUMBER: 60/0FILING DATE: 1998-06-16

1998-06-16

60/089514

60/089512 60/089440

DR APPLICATION NUMBER: 60/089947
DR FILING DATE: 1998-06-19
DR APPLICATION NUMBER: 60/089948
DR FILING DATE: 1998-06-19
DR APPLICATION NUMBER: 60/089952
DR FILING DATE: 1998-06-19
DR APPLICATION NUMBER: 60/090246

Indels Length

Gaps

5

60 .60

124; ω ••

FILING DATE: 1998-06-22

60/090252

R FILING DATE:
R FILING DATE: APPLICATION APPLICATION | FILING DATE:

NUMBER: 60/0: 1998-06-23 NUMBER: 60/ : 1998-06-22 NUMBER: 60/ : 1998-06-22

60/090349 60/090254 R APPLICATION NUMBER: (R FILING DATE: 1998-06-R APPLICATION NUMBER: (R APPLICATION NUMBER: 6-R FILING DATE: 1998-06-

1998-06-18 1998-06-18

806680/09 60/089907

R APPLICATION NUMBER: 60/ R FILING DATE: 1998-06-17 R APPLICATION NUMBER: 60/ R FILING DATE: 1998-06-18

NUMBER: 60/089653 1998-06-17

60/089801

NUMBER: 60/089600 1998-06-17 1998-06-17

OR APPLICATION NUMBER: (
OR FILING DATE: 1998-06OR APPLICATION NUMBER: (
OR FILING DATE: 1998-06-

APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0

иомвек: 60/089598 1998-06-17

60/089599

1998-06-17

60/089538

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10

APPLICATION NUMBER:

APPLICATION NUMBER: 60/088810 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088824 FILING DATE: 1998-06-10

FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-10

60/088742

APPLICATION NUMBER: 60/088738 APPLICATION NUMBER: 60/088734 FILING DATE: 1998-06-10 FILING DATE: 1998-06-09 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: 1998-06-05 APPLICATION NUMBER: 60, FILING DATE: 1998-06-0 FILING DATE: 1998-06-05

```
us-09-989-730-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 266
Publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                               PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR FILING DATE: 1997-00 PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CURRENT FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CURRENT APPLICATION NUMBER: US/09/989,730
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILE REFERENCE: P2730P1C69
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT: Zhang, Z
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              \PPLICANT:
                                                                                                                 PRIOR PRIOR
                                                                                                                                                                           PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     \PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                       PRIOR
                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PPLICANT:
                                                                                       PRIOR
                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                      PRIOR
                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60 FILING DATE: 1997-11-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                APPLICATION NUMBER: 60/
FTT.TNG DATE: 1998-06-04
                                                                                                                                                                           APPLICATION NUMBER: 60/
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: EILING DATE: 1998-03
                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-11-
                                                         APPLICATION NUMBER: 60/088028
                                                                       APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                                                                                                                                                        FILING DATE: 1998-06-02
                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                  FILING DATE: 1998-05-28
            FILING
                              APPLICATION NUMBER: 60/088029
                                             FILING DATE:
                                                                                                     FILING DATE: 1998-06-04
                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                FILING DATE: 1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                266,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski, Paul J.
Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Baker, Kevin P.
Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Williams, P. Mickey Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Kljavin,Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Application US/09989730
o. US20020197674A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Roy,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Daniel
                                                                                                                                                                                                                                                     1998-06-02
                                                                                                                                                                                                                                                                                                                                                                         1998-03-20
                                             1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Secreted and Transmembrane Polypeptides and Nucleic Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2001-11-20
                                                                                                                                                                                                                                                                                               60/087106
                                                                                                                                                                                                                                                                                                                                                          60/083322
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/062250
                                                                                       60/088026
                                                                                                                                                 60/088021
                                                                                                                                                                              60/087827
                                                                                                                                                                                                          60/087759
                                                                                                                                                                                                                                      60/087609
                                                                                                                                                                                                                                                                     60/087607
                                                                                                                                                                                                                                                                                                                                                                                        60/078910
                                                                                                                    60/088025
60/088030
```

```
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                              PRIOR
PRIOR
                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                      PRIOR
                                                                                                    PRIOR
                                                                                                                           PRIOR PRIOR
                                                                                                                                                     PRIOR
                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                 RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RIOR
                                                                                                                 PRIOR
                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                       RIOR
                                                                                                                                                                                                                                                                                                                                                                                                            RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                         RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                           APPLICATION NUMBER: 60/089653
FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089801
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/089599 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089600
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088734
                        APPLICATION NUMBER: 60/
FILING DATE: 1998-06-22
APPLICATION NUMBER: 60/
                                                                                                    APPLICATION NUMBER: 60/089952
                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                 FILING DATE:
                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                      APPLICATION NUMBER: 60/089907
                                                                                                                                                                                                                  FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/1
FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
FILING DATE: APPLICATION
                                                               APPLICATION NUMBER: 60/
FILING DATE: 1998-06-22
                                                                                                                                                     APPLICATION NUMBER:
                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-04
  NUMBER: 60/090349
                                                                                                                                                                                                                                                                                                               момнек: 60/089598
1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-04
                                                                                                                                                                                                                                                                                                                                               1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-3
            1998-06-22
                                                                                         1998-06-19
                                                                                                                                                                   1998-06-18
                                                                                                                                                                                            1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-1
                                                                                                                                           1998-06-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088033
                                                                                                                                                                                                                                                                                                                                                                                   60/089532
                                                                                                                                                                                                                                                                                                                                                                                                            60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/088810
                                                    60/090252
                                                                             60/090246
                                                                                                                                                     60/089947
                                                                                                                                                                              60/089908
                                                                                                                                                                                                                                                                                60/089600
                                                                                                                                                                                                                                                                                                                                                         60/089538
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/088861
                                                                                                                             60/089948
                           60/090254
```

APPLICATION NUMBER:

60/090355

1998-06:

```
Best
                                                                                                                                                     Matches
                                                                                                                                                                             Query Match
                                                                                                                                                                                                                   PR10R
                      119 WKYCI 123
120 WKYCV 124
                                                 19
                                                                         61
                                                                                                                                                                 Loca1
                                                                                                                                                                                                                  FILING DATE:
APPLICATION N
                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                          APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                               F1L1NG DATE
                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F1LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                      FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPL1CATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION FILING DATE
                                            GAERGDILRKADSSTN1FNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                                                           GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                             MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                            61;
                                                                                                                                                                Similarity
                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                          NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER:
                                                                                                                                                                                                                   NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER:
                                                                                                                                                                                                      1998-07-09
                                                                                                                                                                                                                                                        1998-07-07
                                                                                                                                                                                                                                                                                                          1998-07-02
                                                                                                                                                                                                                               1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-25
                                                                                                                                                                                                                                                                                                                                    1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-24
                                                                                                                                                                                                                                                                                                                                                             1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                        1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                               1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                               43.9%;
                                                                                                                                                                                                                 60/092182
                                                                                                                                                                                                                                                                                                                                                                         60/091544
                                                                                                                                                                                                                                                                                                                                                                                                 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                           60/091360
                                                                                                                                                                                                                                           60/091982
                                                                                                                                                                                                                                                                    60/091978
                                                                                                                                                                                                                                                                                                                                               60/091519
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090431
                                                                                                                                                    19;
                                                                                                                                                Pred. No. 3e-1
9; Mismatches
                                                                                                                                                                            Score 281.5;
                                                                                                                                                            .5; DB
3e-22;
                                                                                                                                                 42;
                                                                                                                                                                         9;
                                                                                                                                                                         Length
                                                                                                                                                Indels
                                                                                                                                                                          124;
                                                                                                                                                ω,
                                                                                                                                               Gaps
```

Вb

Qу

Ş

δÃ

2:

```
RESULT 7
US-09-990-436-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 266,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Secreted and Transmeml TITLE OF INVENTION: Acids Encoding the St FILE REFERENCE: PZ730PIC14 CURRENT APPLICATION NUMBER: US/09/990,436 CURRENT FILING DATE: 2001-11-14
                                                  PRIOR
                                                                  PRIOR
                                                                                               PRIOR
                                                                                                               PRIOR
                                                                                                                                                              PRIOR
                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/087609
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT:
                           APPLICATION NUMBER: 60/1
                                                                                          APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                             APPLICATION FILING DATE:
                                                                                                                                                         APPLICATION NUMBER: 60/087827 FILING DATE: 1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1997-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/049787 FILING DATE: 1997-06-16
                                                                                                                            APPLICATION FILING DATE:
                                                                                                                                                                                        APPLICATION NUMBER: 60/087759 FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/087106
                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/084600 FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/083322
                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/062250
                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ashkenazi, Avi J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       wood, William
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Williams,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Paoni,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Grimaldi, J.Christopher
Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gerber,Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Eaton, Dan L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Baker,Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09990436
5. US20020198148A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Margaret Ann
Part, Timothy /
NUMBER: 60/088029: 1998-06-04
                                                                             NUMBER: 60/088026
                                                                                                                                            NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Nicholas
                                                             1998-06-04
                                                                                                                                                                                                                     1998-06-02
                                                                                                                                                                                                                                                                                      1998-05-28
                                                                                                                                                                                                                                                                                                                                                  1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                  1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zemin
                                                                                                                          1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Daniel
                                                                                                                                                                                                                                                       1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                    1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Colin K.
                                                                                                                                           60/088021
                                              60/088028
                                                                                                          60/088025
                                                                                                                                                                                                                                                                      60/087607
                                                                                                                                                                                                                                                                                                                                                                                                 60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Transmembrane Polypeptides and Nucleic
```

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/

60/088033 60/088030

FILING DATE: 1998-06-04

PRIOR PRIOR

PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-10

FILING DATE: 1998-06-09 APPLICATION NUMBER: 60/088655 FILING DATE: 1998-06-05 FILING DATE: 1998-06-05

FILING DATE: 1998-06-10 APPLICATION NUMBER:

60/088742

60/088738 60/088734

60/088810

PRIOR

APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-10

APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-10

60/088824

PRIOR

PRIOR PRIOR

> APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04

1998-06-05

60/088212 60/088202 60/088167 60/088326

APPLICATION NUMBER: 60/088217

PRIOR

FILING DATE: 1998-06-05

```
2
                                                                  Вþ
                                                                                          Š
                                                                                                                         В
                                                                                                                                                    δõ
                                                                                                                                                                                 Best Loc
Matches
                                                                                                                                                                                                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: 60/090676
PRIOR FILING DATE: 1998-06-25
PRIOR APPLICATION NUMBER: 60/090678
PRIOR FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                     119
          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OR APPLICATION NUMBER: 60/090694
OR FILING DATE: 1998-06-25
OR APPLICATION NUMBER: 60/090695
OR FILING DATE: 1998-06-25
OR APPLICATION NUMBER: 60/090696
OR APPLICATION NUMBER: 60/090862
OR APPLICATION NUMBER: 60/090862
OR APPLICATION NUMBER: 60/090862
OR FILING DATE: 1998-06-26
                                                                  61
                                                                                             61
                                                                                                                          ш
                                                                                                                                         Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/090542
FILING DATE: 1998-66-24
APPLICATION NUMBER: 60/090557
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                        FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/090690 FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090445
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/
FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091982
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 1998-07
                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091626 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/091519
FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/
FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING
WKYCV
                                     WKYCI 123
                                                                 GAERGDILRKADSSTNIENPRGNLRKFQDESGQDPNILLSHLLARIWKPYKKR-ETPDCF
                                                                                  GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                         MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                    61;
                                                                                                                                                                                               similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DATE: 1998-06-23
          124
                                                                                                                                                                                43.9%;
nilarity 48.8%;
Conservative 19
                                                                                                                                                                                                                                                                                                                              1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090355
                                                                                                                                                                                                                                                                                                                                             60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090435
                                                                                                                                                                                    19;
                                                                                                                                                                                 Score 281.5; DB
Pred. No. 3e-22;
9; Mismatches
                                                                                                                                                                                                             DB 9;
                                                                                                                                                                                    42;
                                                                                                                                                                                   Indels
                                                                                                                                                                                                               Length
                                                                                                                                                                                                                124;
                                                                                                                                                                                   ω
```

PRIOR PRIOR

FILING DATE: APPLICATION NUMBER:

: 1998-06-17 . 1998-06-17

PRIOR PRIOR

FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0

APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-17

PRIOR PRIOR

FILING DATE: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER:

998-06-16

998-06-16 998-06-16

60/089514

60/089512 60/089440

PRIOR

APPLICATION NUMBER: 60/089532 FILING DATE: 1998-06-17

омьек: 60/089538 1998-06-17

60/089598

PRIOR

FILING DATE:

APPLICATION NUMBER:

UMBER: 60/089105 1998-06-12

APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-06

.998-06-1

60/088876 60/088861

APPLICATION NUMBER: FILING DATE: 1998-08

PR1OR

PRIOR

1998-06-11

PRIOR

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-11

NUMBER: 60/088826 1998-06-10

60/088858

PRIOR PRIOR PRIOR PRIOR PRIOR

R APPLICATION NUMBER: 6
R FILING DATE: 1998-06
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06
R FILING DATE: 1998-06
R FILING DATE: 1998-06
R APPLICATION NUMBER: 6
R APPLICATION NUMBER: 6

NUMBER: 60/089907 1998-06-18 NUMBER: 60/089801 1998-06-18 NUMBER: 60/089653 1998-06-17

PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR PRIOR

FILING DATE: 1998-0 APPLICATION NUMBER:

1998-06-19

60/089948 60/089947 60/089908

NUMBER: 60/089952 1998-06-19

APPLICATION NUMBER:

FILING DATE: 1998-06-18 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-19

Gaps

2

60

FILING DATE: 1998-06-22 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-22

60/090252 60/090246

APPLICATION NUMBER: FILING DATE:

APPLICATION NUMBER: 60/090254

:-90-8661

FILING DATE APPLICATION

```
CURRENT FILING DATE: 2001-11-16
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
PRIOR FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 8
US-09-991-181-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GENERAL INFOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 266, Applic Publication No. US20 GENERAL INFORMATION:
                                                                              PRIOR
PRIOR
                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                             PRIOR
                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/991,181
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C53
                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                     OR APPLICATION NUMBER: 60/083322
OR FILING DATE: 1998-04-28
OR APPLICATION NUMBER: 60/084600
OR FILING DATE: 1998-05-07
OR APPLICATION NUMBER: 60/087106
OR FILING DATE: 1998-05-28
OR APPLICATION NUMBER: 60/087607
OR FILING DATE: 1998-06-02
OR FILING DATE: 1998-06-02
                                                                                                                                                                       FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: FILING DATE: 1998-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/065311
FILING DATE: 1997-11-13
APPLICATION NUMBER: 60/066770
FILING DATE: 1997-11-24
                                                                         APPLICATION NUMBER:
                                                                                                         FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                       FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/088021
                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/087609
                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/075945
FILING DATE: 1998-02-25
                                         APPLICATION NUMBER:
                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ashkenazi, Avi J.
Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Watanabe, Colin K. Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Paoni, Nicholas F.
Roy, Margaret Ann
Stewart, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gerber, Hanspeter
Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Godowski,Paul J.
Grimaldi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Kljavin, Ivar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gurney, Austin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Application
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US20020197615A1
                                                        1998-06-04
                                                                                                                          1998-06-04
                                                                                            1998-06-04
                         1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                        1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ب
                                                                                                           60/088025
                                         60/088028
                                                                                                                                                                                                          60/087759
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US/09991181
           60/088029
                                                                           60/088026
                                                                                                                                                                        60/087827
                                                                                                                                                                                                                                                                                                                                                                                                       60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nucleic
                         PRIOR APPLICATION NUMBER: 60/089801
PRIOR FILING DATE: 1998-06-18
PRIOR APPLICATION NUMBER: 60/089907
PRIOR FILING DATE: 1998-06-18
PRIOR APPLICATION NUMBER: 60/089908
PRIOR APPLICATION NUMBER: 60/089947
PRIOR APPLICATION NUMBER: 60/089947
PRIOR APPLICATION NUMBER: 60/089947
PRIOR PILING DATE: 1998-06-19
PRIOR APPLICATION NUMBER: 60/089948
PRIOR APPLICATION NUMBER: 60/089952
PRIOR TILING DATE: 1998-06-19
PRIOR PILING DATE: 1998-06-19
PRIOR APPLICATION NUMBER: 60/08952
PRIOR APPLICATION NUMBER: 60/090226
PRIOR APPLICATION NUMBER: 60/090252
                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OR FILING DATE: 1998-06-04
COR APPLICATION NUMBER: 60/088030
COR FILING DATE: 1998-06-04
TOR APPLICATION NUMBER: 60/088033
LOR FILING DATE: 1998-06-04
LOR APPLICATION NUMBER: 60/088326
TOR FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089538
FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089598
FILING DATE: 1998-06-17
APPLICATION FILING DATE:
                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/089653
FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-08 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-12
APPLICATION NUMBER: 60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60 FILING DATE: 1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
FILING DATE: 1998-06
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-01
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LING DATE:
                                                                                                                                                                                                                                                                                                                             1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER: 60/089532
1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-16
                                                                                                                                                                                                                                                                                                                                                             1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             998-06-05
                                                                                                                                                                                                                                                                                                                                  60/089600
6-17
                                                                                                                                                                                                                                                                                                                                                                            60/089599
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/089105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088826
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/088202
```

```
δ
                                                                                          рЬ
20
                                В
                                                                                                                       20
                                                                                                                                                                      Query Match
Best Local 9
                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                               PRIOR PRIOR
 119 WKYCI 123
                                61
                                                              61
                                                                                            <u>...</u>
                                                                                                                        -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-0
APPLICATION NUMBER:
FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090429 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/090678 FILING DATE: 1998-06-25 APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090445 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION FILING DATE:
                                                                                                                                                                                                                     FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/092182
FILING DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/090694 FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/091519 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091978
                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                                                FILING DATE: 1998-07-07
                                                                                          GAERGDILRKADSSTNIFNPRGNLRKFQDFSGODPNILLSHLLARIWKPYKKR-ETPDCF 119
                                               GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKOHGAAPECF 118
                                                                                                                                                         61;
                                                                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DATE:
                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER: 60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-26
                                                                                                                                                                      48.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090862
                                                                                                                                                                                                                                                                 60/091982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/091360
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090676
                                                                                                                                                         19;
                                                                                                                                                         Score 281.5;
Pred. No. 3e-2
L9; Mismatches
                                                                                                                                                                         3e-22;
                                                                                                                                                                                     DB 9;
                                                                                                                                                         42;
                                                                                                                                                                                       Length 124;
                                                                                                                                                           Indels
                                                                                                                                                         ω
                                                                                                                                                           Gaps
```

```
Db 120 WKYCV 124
RESULT 9
```

US-09-993-687-266 GENERAL INFORMATION: Sequence 266, A Publication No. TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same APPLICANT: Ashkenazi, Avi J PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-06-16 CURRENT APPLICATION NUMBER: US/09/993,687
CURRENT FILING DATE: 2002-11-14 APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT: APPLICANT APPLICANT: PRIOR PRIOR PRIOR PRIOR PRIOR APPLICATION NUMBER: 60/ PRIOR FILING DATE: 1997-11-24 PRIOR APPLICATION NUMBER: 60/065311
PRIOR FILING DATE: 1997-11-13 PRIOR APPLICATION NUMBER: 60/065186 PRIOR FILING DATE: 1997-11-12 PRIOR APPLICATION NUMBER: 60/ PRIOR FILING DATE: 1997-10-17 APPLICANT: APPLICANT: PRIOR PRIOR PRIOR PRIOR PRIOR APPLICATION NUMBER: 60/ PRIOR FILING DATE: 1998-03-20 PRIOR APPLICATION NUMBER: 60/PRIOR FILING DATE: 1998-02-25 FILE REFERENCE: P2730P1C11 APPLICANT: APPLICANT: PRIOR PRIOR PRIOR FILING DATE: 1998-05
PRIOR APPLICATION NUMBER: PRIOR PRIOR APPLICATION NUMBER: 60/083322 PRIOR FILING DATE: 1998-04-28 PRIOR APPLICATION NUMBER: PRIOR RIOR APPLICATION NUMBER: 60/088025 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04 FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: 60/ FILING DATE: 1998-05-07 APPLICATION NUMBER: 60/088021 FILING DATE: 1998-06-04 FILING DATE: 1998-06-03 APPLICATION NUMBER: FILING DATE: 1998-06-02 APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-04 Paoni, Nicholas F. Roy, Margaret Ann Stewart, Timothy A Goddard, Audrey Godowski, Paul J Gerritsen, Mary E. Gerber, Hanspeter Desnoyers, Luc Baker, Kevin P. Watanabe, Colin K. Williams, P. Mickey Gurney, Austin Grimaldi, J. Christopher Fong,Sherman Ferrara, Napoleone Eaton, Dan L. Botstein, David Wood, William 1. Tumas, Kljavin,Ivar J Application US/09993687 Zhang, Zemin Pan, James Napier, Mary A. US20020198149A1 Daniel 1998-06-02 1998-06-02 1998-05-28 60/087827 60/087607 60/078910 60/075945 60/062250 60/088028 60/087609 60/087106 60/084600 60/066770 60/087759

2;

```
В
                                 ρ
                                                              B
                                                                                        Q
                                                                                                                 Matches
                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
         61
                                  61
                                                                                                                               Loca1
                                                                                                                                                                 FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/
FILING DATE: 1998-07-09
                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/
FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090695
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-25
                                                    MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-
GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                 GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090429 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                           ch 43.9%; Score 281.5; DB Similarity 48.8%; Pred. No. 3e-22; 61; Conservative 19; Mismatches
                                                                                                                                                                                                                                                   1998-07-02
                                                                                                                                                                                                                         1998-07-07
                                                                                                                                                                                                                                                                             1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    I998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-23
                                                                                                                                                                               60/092182
                                                                                                                                                                                                           60/091982
                                                                                                                                                                                                                                                                                          60/091626
                                                                                                                                                                                                                                                                                                                    60/091519
                                                                                                                                                                                                                                     60/091978
                                                                                                                                                                                                                                                                60/091633
                                                                                                                                                                                                                                                                                                                                                                                                                             598060/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 069060/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090349
                                                                                                                                    ,6 ad
                                                                                                             42;
                                                                                                           Indels
                                                                                                                                    Length
                                                                                                                                      124;
                                                                                                           ω
••
                                                                                                         Gaps
                                                       60
                                                                                60
```

PRIOR PRIOR

FILING DATE:

1998-06-17

NUMBER: 60/089801 1998-06-18

FILING DATE: 1998-0 APPLICATION NUMBER:

APPLICATION NUMBER: 60/089599

1998-06-17

FILING DATE: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0

APPLICATION NUMBER:

т998-06-17

NUMBER: 60/089538 1998-06-17

NUMBER: 60/089532 1998-06-17

1998-06-16 1998-06-

60/089514 60/089512

R APPLICATION NUMBER: (
R FILING DATE: 1998-06R APPLICATION NUMBER: (
R FILING DATE: 1998-06-

R APPLICATION NUMBER: (R FILING DATE: 1998-06 R APPLICATION NUMBER: (R FILING DATE: 1998-06

1998-06-18

APPLICATION NUMBER: 60/089947 FILING DATE: 1998-06-19 APPLICATION NUMBER: 60/089948

1998-06-18

806680/09 60/089907

FILING DATE: 1998-06-22 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-22 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: 1998-06-19

N NUMBER: 60/0 E: 1998-06-22

60/090252

119 WKYCI 123

Ŋ

1998-06-19

60/089952 60/090246

PRIOR PRIOR

PRIOR PRIOR PRIOR PRIOR PRIOR

PRIOR

FILING DATE: APPLICATION NUMBER:

APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-16

60/089440

FILING DATE: 1998-06-12 APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-11

60/088861 60/088858 60/088826

APPLICATION NUMBER: 60/088876 FILING DATE: 1998-06-11

1998-06-11

60/089109

APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER:

998-06-10

FILING DATE:

1998-06-11

APPLICATION NUMBER: 60/088810
APPLICATION NUMBER: 60/088810
APPLICATION NUMBER: 60/088824

NUMBER: 60/088824

1998-06-10

FILING DATE: APPLICATION N

NUMBER:

60/088742

1998-06-10

FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088738

APPLICATION NUMBER: FILING DATE:

60/088734

APPLICATION NUMBER: 60/088217

1998-06-05 1998-06-05

FILING DATE:

APPLICATION NUMBER: FILING DATE: APPLICATION FILING DATE:

NUMBER:

60/088202 60/088212

FILING DATE: APPLICATION

NUMBER: 60/088167

1998-06-04 1998-06-04 1998-06-04

1998-06-05

APPLICATION NUMBER: 60/088326

FILING DATE: APPLICATION NUMBER:

> 60/088033 60/088030

NUMBER: 60/088029: 1998-06-04

NUMBER:

FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088655

1998-06-09

1998-06-04 1998-06-04 1998-06-04

60/088030 60/088029

1998-06-04

60/088326 60/088033

1998-06-05 1998-06-05

60/088202

.998-06-05

60/088212

60/088734

```
В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 10
US-09-989-734-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GENERAL INFORMATION:
APPLICANT: Ashkenaz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/989,734
CURRENT FILING DATE: 2001-11-19
                                                                                                                                                          PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR FILING DATE: 1997-0
PRIOR APPLICATION NUMBER:
PRIOR FILING DATE: 1997-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILE REFERENCE: P2730P1C64
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/049787
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PPLICANT
                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PPLICANT:
                                                               PRIOR
                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WKYCV
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/083322
FILING DATE: 1998-04-28
                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088028
                                                                                                                                                                         APPLICATION NUMBER: 60/
FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                  FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/078910
                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/
FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1997-11-12
                                               APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
                                                                                            APPLICATION NUMBER: FILING DATE: 1998-01 APPLICATION NUMBER:
                                                                                                                                          APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                     FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/084600
                                                                               FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             266,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Botsteln, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grlmaldi,J.Chrlstopher
Gurney,Austln_L
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Baker,Kevin P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang, Zemln
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kljavln,Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Application US/09989734
b. US20030003531A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Daniel
                                                                                                                                            1998-06-02
                                                                                                                                                                                                         1998-06-02
                                                                                                                                                                                                                                     1998-05-28
                                                                                                              1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Colin K.
                                                                                                                                                            60/087759
                                                                                                                                                                                          60/087609
                                                                                                                                                                                                                         60/087607
                                                                                                                                                                                                                                                                                                                                                                                  60/075945
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/062250
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ħ
                                                               60/088025
                                                                                                                              60/087827
                                                                                                                                                                                                                                                       60/087106
                                                                                            60/088021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR FILING
                                                                                                                                                                                                                             PRIOR
PRIOR
                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                    PRIOR
                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                    PRIOR
                                                                                                                    PRIOR
                                                                                                                                    PRIOR
                                                                                                                                                  PRIOR
                                                                                                                                                                  PRIOR
                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                           RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RIOR
                                                                                                                                 R APPLICATION NUMBER: (R FILING DATE: 1998-06 R APPLICATION NUMBER: (R APPLICATION NUMBER: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-00 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/089598 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                      APPLICATION NUMBER: 60/
FILING DATE: 1998-06-19
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-22
                                                                                                                                                                                                                             APPLICATION NUMBER: 60/
FILING DATE: 1998-06-18
                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/088655
                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/088861
           APPLICATION FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                DATE:
```

1998-06-11 1998-06-13 1998-06-10 1998-06-10 1998-06-10 1998-06-10 1998-06-1998-06-10 1998-06-09 1998-06-05

60/088858 60/088826

60/088876

60/088824 60/088810 60/088742 60/088738

1998-06-12 1998-06-11

60/089105

60/089440

NUMBER: 60/090252

1998-06-1 1998-06-1 1998-06-18

60/089952

60/090246

60/089948

60/089947

1998-06-22

NUMBER: 60/089907 1998-06-18

806680/09

1998-06-17 1998-06-17

60/089801 60/089653 60/089600 60/089599

1998-06-17

1998-06-17 1998-06-17

60/089538 60/089532 60/089514

```
61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF
                         61 GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                  MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                                                                             MDRVPFCCLLFIGLINPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                                                  Score 281.5;
Pred. No. 3e
                                                                                                                                    Mismatches
                                                                                                                                               3e-22;
                                                                                                                                                               DB 9;
                                                                                                                                    42;
                                                                                                                                  Indels
                                                                                                                                                               Length 124;
                                                                                                                                 ω
                                                                                                                               Gaps
                                                                   60
                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RESULT 11
US-09-997-653-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Publication
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/997,653
CURRENT FILING DATE: 2001-11-15
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION: Secreted and Transmembra:
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C38
                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Ashkenazi, Avi J
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119 WKYCI 123
                                                        APPLICATION NUMBER: 60/087827
FILING DATE: 1998-06-03
APPLICATION NUMBER: 60/088021
                                                                                                                    APPLICATION NUMBER: 60/087609
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087759
                                                                                                          FILING DATE: 1998-06-02
                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                FILING DATE: 1998-04-28
APPLICATION NUMBER: 60/084600
FILING DATE: 1998-05-07
                                                                                                                                                                                                                                                                                               FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: 60/0
FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/062250 FILING DATE: 1997-10-17
                                                                                                                                                                                                                   APPLICATION NUMBER: 60/087106
                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/075945
                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     266,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Zhang, Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Watanabe, Colin K.
Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Paoni, Nicholas F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Kljavin, Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Goddard,Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Baker, Kevin P.
Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Application US/09997653
DS20030008297A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Margaret Ann art, Timothy A.
                                           1998-06-04
         1998-06-04
                                                                                                                                                                       1998-06-02
                                                                                                                                                                                                      1998-05-28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Daniel
                           60/088025
                                                                                                                                                                                    60/087607
                                                                                                                                                                                                                                                                                60/083322
                                                                                                                                                                                                                                                                                                               60/078910
                                                                                                                                                                                                                                                                                                                                                                                                         60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                          60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            편
.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Transmembrane Polypeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 and Nucleic
```

В Qy В δÃ

Matches Best Query Match

Local

Similarity

43.98;

Conservative

19;

R FILING DATE: R APPLICATION N R FILING DATE:

NUMBER:

60/092182

1998-07-09

APPLICATION NUMBER: 60/091982 FILING DATE: 1998-07-07

FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER:

1998-07-07 1998-07-02 1998-07-02

60/091978 60/091633 60/091626

APPLICATION NUMBER: 60/091519 FILING DATE: 1998-07-02

FILING DATE:

1998-07-01 1998-07-02

60/091544 60/091478 60/091360 60/090863 60/090862 60/090696

APPLICATION NUMBER:

FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0

FILING DATE:

1998-07-01

APPLICATION NUMBER: FILING DATE: FILING DATE:

APPLICATION

NUMBER:

1998-06-26 1998-06-26 APPLICATION NUMBER: 60/ FILING DATE: 1998-06-25

APPLICATION NUMBER: 60/090695

1998-06-25 1998-06-25

60/090694 60/090690 60/090678 60/090676

1998-06-25

APPLICATION NUMBER:

APPLICATION NUMBER:

1998-06-25

ILING DATE: LING DATE: LING DATE:

APPLICATION NUMBER:

APPLICATION NUMBER:

LING DATE:

1998-06-25

APPLICATION NUMBER: 60/090557 FILING DATE: 1998-06-24

FILING DATE: APPLICATION NUMBER:

1998-06-24

60/090542

APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090535 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090472

FILING DATE: APPLICATION NUMBER: FILING DATE:

1998-06-24

60/090445

1998-06-24

APPLICATION NUMBER: 60/090444

1998-06-24

1998-06-

FILING DATE:

APPLICATION NUMBER: 60/090435

1998-06-24

FILING DATE:

APPLICATION NUMBER: 60/090431 FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/090429

NUMBER: 60/090349 NUMBER: 60/090254: 1998-06-22

1998-06-

1998-06-23

60/090355

APPLICATION NUMBER:

```
PRIOR FILING DATE: 1998-06-05
PRIOR APPLICATION NUMBER: 60/088202
                                                                                                                  PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR PRIOR
                                                                                                                                                                                 PRIOR PRIOR
                                                                 PRIOR
                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                   PRIOR
                                 PRIOR
                                                                                  PRIOR
                                                                                                    PRIOR
                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DR APPLICATION NUMBER: 60/088861
DR FILING DATE: 1998-06-11
PR APPLICATION NUMBER: 60/088876
PR FILING DATE: 1998-06-11
PR APPLICATION NUMBER: 60/089105
PR FILING DATE: 1998-06-12
PR APPLICATION NUMBER: 60/089440
PR APPLICATION NUMBER: 60/089440
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DR APPLICATION NUMBER: 60/088824
DR FILING DATE: 1998-06-10
PR APPLICATION NUMBER: 60/08826
DR FILING DATE: 1998-06-10
DR APPLICATION NUMBER: 60/088858
DR FILING DATE: 1998-06-11
DR FILING DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                  R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
R APPLICATION NUMBER: 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/088738 FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088742 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/
FILING DATE: 1998-06-04
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/088033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/088734 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/088810
                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE: 1998-06-10
                                                FILING DATE: 1998-06-19
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-19
                                                                                                                                 FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                  FILING
                                   APPLICATION
                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                   FILING DATE: 1998-06-18
                                                                                                                                                                                                  APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                  FILING DATE:
                DATE
                                 NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06
                                                                                                                                                                                                                                          1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-05
                                                                                                                                                                                                                                                                                                                      1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-
                                                                                                                                                                                                                                                                                                                                                                                      1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-16
                                                                                                                                                                                                                                                                                      1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-17
                                                                                                                   1998-06-19
                                                                                                                                                   1998-06-18
                                                                                                                                                                                                                                                                                                                                                      1998-06-1
                    998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/088028
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                     60/089532
                                                                                                                                                                    806680/09
                                                                                                                                                                                                                                     60/089801
                                                                                                                                                                                                                                                                                                     60/089600
                                                                                                                                                                                                                                                                                                                                  60/089599
                                                                                                                                                                                                                                                                                                                                                                   60/089598
                                   60/090246
                                                                 60/089952
                                                                                                    60/089948
                                                                                                                                    60/089947
                                                                                                                                                                                                  60/089907
                                                                                                                                                                                                                                                                                                                                                                                                   60/089538
60/090252
```

PRIOR

PRIOR

PRIOR

PRIOR PRIOR

```
PRIOR APPLICATION NU
PRIOR FILING DATE: 1
PRIOR APPLICATION NU
PRIOR FILING DATE: 1
PRIOR APPLICATION NU
PRIOR FILING DATE: 1
Ouery Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR PRIOR
                                                                     PRIOR PRIOR
                                                                                                                                                                                                                          PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                        PRIOR
                                                                                                               PRIOR
                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                  PRIOR
                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                              PRIOR
                                                                                                                                                        PRIOR
                                                                                                                                                                      PRIOR
                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-22 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090472
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/
                                                                                                                          FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091626
FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091633
                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-24
                                                                                                                                                                                  FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091544
FILING DATE: 1998-07-01
APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                        FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                         FILING DATE: 1998-07-07
APPLICATION NUMBER: 60/091982
FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                            FILING
                                            APPLICATION NUMBER:
                                                                                                  APPLICATION NUMBER:
                                                                                                                FILING DATE: 1
                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                           ATION NUMBER: 60/092182
DATE: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER: 60/090435
1998-06-24
                                                                                                                                                                                                                                                                                                               1998-06-26
                                                                                                                                                                                                                                                                                                                                         1998-06-25
                                                                                                                                                                                                                                                                                                                                                                    1998-06-
                                                                                                                                                                                                                                                                                                                                                                                               1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-
                                                                                                                                                                                                                                                         1998-07-01
                                                                                                                                                                                                                                                                                    1998-06-26
                                                                                     1998-07-07
                                                                                                                  998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090355
                                                                                                                                                                                                                                                                                                                                                                                  60/090695
                                                                                                                                                                                                                                                                                                                                                                                                             60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090540
                                                                                                  60/091978
                                                                                                                                                                                                                                           60/091478
                                                                                                                                                                                                                                                                      60/091360
                                                                                                                                                                                                                                                                                                 60/090863
                                                                                                                                                                                                                                                                                                                            60/090862
                                                                                                                                                                                                                                                                                                                                                      60/090696
 DB 9;
```

õ 망 9 B Matches Best Local Similarity nes 61; Conserv 61 61 Н GTEAGESPGEAGPSTETPTPRGSMRK--AFAGONSNTVLSRLLARTRKQHKOHGAAPECF 118 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF Conservative 43.9%; 19; Score 281.5; DB Pred. No. 3e-22; 9; Mismatches 42; Indels ω Gaps 60 60

Length

124;

۲,

밁 Ş

```
APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C4
CURRENT APPLICATION NUMBER: US/09/93,667
CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR APPLICATION NUMBER: 60/06250
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION UMBER: 60/065186
PRIOR APPLICATION NUMBER: 60/065186
PRIOR FILING DATE: 1997-11-12
PRIOR APPLICATION NUMBER: 60/065311
PRIOR APPLICATION NUMBER: 60/065311
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
US-09-993-667-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL 1NFO
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                 PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 266, Publication N
                                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                              OR APPLICATION NUMBER: 60/087609

R FILING DATE: 1998-06-02

OR APPLICATION NUMBER: 60/087759

OR APPLICATION NUMBER: 60/087827

OR APPLICATION NUMBER: 60/087827

OR PILING DATE: 1998-06-03

OR APPLICATION NUMBER: 60/088021

OR FILING DATE: 1998-06-04

OR FILING DATE: 1998-06-04

OR APPLICATION NUMBER: 60/088025
                                                                                                                                                                                       R APPLICATION NUMBER: 6
R FILING DATE: 1998-05-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-06-
                                                                                                                                                                                                                                                       OR APPLICATION NUMBER: (
OR FILING DATE: 1998-04-
OR APPLICATION NUMBER: (
OR FILING DATE: 1998-05-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/066770 FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                                                              FILING DATE:
                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ) WKYCI 123.
||||:
| WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -
O
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Watanabe, Colin K. Williams, P. Mickey Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Baker, Kevin P.
Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kljavin, Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimaldi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gerber,Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fong,Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Application US/09993667
5. US20030022187A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                    NUMBER: 60/084600
1998-05-07
                                     1998-06-04
                                                                                                                                                                                          1998-06-02
                                                                                                                                                                                                                          1998-05-28
                                                                                                                                                                                                                                                                                  1998-04-28
                                                                                                                                                                                                                                                                                                                 1998-03-20
                                                                                                                                                                                                                                                                                                                                           1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Daniel
                                                                                                                                                                                                        60/087607
                                                                                                                                                                                                                                      60/087106
                                                                                                                                                                                                                                                                                                60/083322
                                                                                                                                                                                                                                                                                                                               60/078910
                                                                                                                                                                                                                                                                                                                                                           60/075945
                                                                                                                                                                                                          PRIOR
PRIOR
                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PR1OR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PR10R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
DR FILING DATE: 1998-06-19
TAPPLICATION NUMBER: 60/089948
DR FILING DATE: 1998-06-19
DR APPLICATION NUMBER: 60/089952
DR FILING DATE: 1998-06-19
DR APPLICATION NUMBER: 60/090246
DR FILING DATE: 1998-06-22
                                                                                          R APPLICATION NUMBER: 60/
R FILING DATE: 1998-06-18
R APPLICATION NUMBER: 60/
PR FILING DATE: 1998-06-19
                                                                                                                                                        FILING DATE:
                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                      APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-00
                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/089599
FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/089538 FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/089532
FILING DATE: 1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: FILING DATE: 1998-00
                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/089440 FILING DATE: 1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/
FILING DATE: 1998-06-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60
FTI.TNG DATE: 1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          F1L1NG DATE: 1998-06-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/088858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: F1LING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F1LING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: APPLICATION N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DATE: 1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATION NUMBER: 60/
DATE: 1998-06-04
                                                                                                                           1998-06-18
                                                                                                                                                                                       1998-06-18
                                                                                                                                                                                                                        1998-06-17
                                                                                                                                                          1998-06-18
                                                                                                                                                                                                                                                                                                               1998-06-17
                                                                                                                                                                                                                                                  1998-06-17
                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-04
                                                                                                           60/089947
                                                                                                                                          806680/09
                                                                                                                                                                        60/089907
                                                                                                                                                                                                     60/08980
                                                                                                                                                                                                                                   60/089653
                                                                                                                                                                                                                                                                60/089600
                                                                                                                                                                                                                                                                                                                             60/089598
                                                                                                                                                                                                                                                                                                                                                                                                                    60/089514
                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/089512
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01680/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088861
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088876
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088824
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088810
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/088742
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088738
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/088734
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/088655
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/088217
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088212
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/088033
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/088202
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/088167
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/088326
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/088030
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/088029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/088028
```

```
ş
              ş
                                             В
                                                                                                          Matches
                                                                                                                                       Query Match
                                                                                                                         Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RIOR
               61
                                                                                                                         Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-23
                                                                             ۳
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/090695
FILING DATE: 1998-06-25
APPLICATION NUMBER: 60/090696
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090542
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090540
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
                                                                                                                                                           APPLICATION 1990 V, APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/090862
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/091626 FILING DATE: 1998-07-02 APPLICATION NUMBER: 60/091633 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 60/091478 FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/091360 FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-25
                                                                                                                                                                                                                                APPLICATION NUMBER: 60/091978 FILING DATE: 1998-07-07
                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/091544 FILING DATE: 1998-07-01
                                                                                                                                                                                                                     APPLICATION NUMBER:
GTEAGESPGEAGPSTETPTPRGSMRK--AFAGONSNTVLSRLLARTRKOHKQHGAAPECF 118
                                                                MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                               MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-25
                                                                                                                                                                                                                                                                                                                             1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1998-06-26
                                                                                                                         43.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090863
                                                                                                                                                                                      60/092182
                                                                                                                                                                                                                     60/091982
                                                                                                              19;
                                                                                                          Score 281.5; DB 9;
pred. No. 3e-22;
9; Mismatches 42;
                                                                                                                                          Length 124;
                                                                                                               Indels
                                                                                                                 ω
--
                                                                                                                 Gaps
```

2

```
US-09-990-438-266; Sequence 266, Appropriation No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION NUMBER: US/09/990,438
CURRENT FILING DATE: 2001-11-14
PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                          PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
FILE REFERENCE: P2730P1C3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT
                                                                                                                                                                                                                                         PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                              PRIOR FILING DATE: 1997-11-12
                                          PRIOR
                                                                         PRIOR
                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                    PRIOR FILING DATE:
                                                                                        PRIOR
                                                                                                                                   PRIOR
                                                                                                                                                                                PRIOR
                                                                                                                                                                                                             PRIOR FILING DATE: 1998-0.
PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                    PRIOR APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                    PRIOR FILING DATE:
                                                           PRIOR
                                                                                                      PRIOR
                                                                                                                      PRIOR
                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             119 WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119
                                                                                                                                                                  FILING DATE: 1998-05-07
APPLICATION NUMBER: 60/087106
FILING DATE: 1998-05-07
                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                         FILING DATE:
                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/065311 FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WKYCV 124
                                                        APPLICATION NUMBER: 60/087759
FILING DATE: 1998-06-02
APPLICATION NUMBER: 60/087827
                                                                                                                    APPLICATION NUMBER: 60/087609
                                                                                                                                                 APPLICATION NUMBER:
APPLICATION NUMBER: 60/088025
               FILING DATE: 1998-06-04
                             APPLICATION NUMBER:
                                                                                                     FILING DATE: 1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gerritsen, Mary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Application US/09990438 o. US20030027754A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Tumas, Daniel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Kljavin,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Grimaldi,J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Godowski,Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                   ..UMBER: 60/062250
1997-10-17
                                                                                                                                                                                                                              1998-04-28
                                                                                                                                                                                                                                                           1998-03-20
                                                                                                                                                                                                                                                                                        1998-02-25
                                                                                                                                                                                                                                                                                                                     1997-11-24
                                              1998-06-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Colin K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ۷.
                                                                                                                                                                                                                                                                                                    60/075945
                                                                                                                                                 60/087607
                                                                                                                                                                                                                                          60/083322
                                                                                                                                                                                                                                                                       60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ħ
                              60/088021
```

```
Query Match
Best Local Similarity
Matches 61; Conserv
                                                                                                                                                                                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                     PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PR1OR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PR1OR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PR10R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR FILING DATE: 1990-0- C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PR10R
                                                                                                                                                                                                                      JR AFFLICA.

JR AFFLICATION NUMBER: 60/091360

OR APPLICATION STATE: 1998-07-01

IOR APPLICATION NUMBER: 60/091478

TOR APPLICATION NUMBER: 60/091478

TOTAL DATE: 1998-07-02

APPLICATION NUMBER: 60/091544
                                                   APPLICATION FILING DATE:
                                                                                                      APPLICATION FILING DATE:
                                                                                           APPLICATION
                                                                                                                                                         APPLICATION NUMBER: 60/091626 FILING DATE: 1998-07-02
                                                                                                                                                                                                             APPLICATION NUMBER: FILING DATE: 1998-07
                                                                              FILING DATE:
                                                                                                                                FILING DATE:
                                                                                                                                          APPLICATION NUMBER: 60/091633
                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: F1LING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: F1LING DATE: 1998-06
                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-0 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F1L1NG DATE:
APPLICATION |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                        N NUMBER: 60/0
E: 1998-07-07
                                                                                                      NUMBER: 60/
: 1998-07-07
                                                   NUMBER: 60/092182
: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NUMBER:
                                                                                                                                1998-07-02
                                                                                                                                                                                    1998-07-02
                                                                                                                                                                                                             1998-07-01
                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                      1998-06-25
                                                                                                                                                                                                                                                                                                                   1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        .998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .998-06-24
            43.9%;
                                                                                         60/091982
                                                                                                                  60/091978
                                                                                                                                                                                               60/091519
                                                                                                                                                                                                                                                                                                                               60/090862
                                                                                                                                                                                                                                                                                                                                                                                    60/090695
                                                                                                                                                                                                                                                                                                                                                         60/090696
                                                                                                                                                                                                                                                                                                                                                                                                            60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                873060/09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090252
         Score 281.5; DB Pred No. 3e-22;
```

PRIOR

FILING DATE: FILING DATE: 1998-00 APPLICATION NUMBER:

APPLICATION NUMBER: 60/088858

FILING DATE: 1998-00 APPLICATION NUMBER: FILING DATE: 1998-00

60/088861

PR10R

PRIOR

PRIOR

PRIOR

PRIOR

APPLICATION NUMBER: 60/088202 FILING DATE: 1998-06-05 APPLICATION NUMBER: 60/088212

998-06-05

PR10R PR10R

FILING DATE: 1998-06 APPLICATION NUMBER: F1LING DATE: 1998-00 APPLICATION NUMBER:

1998-06-04 1998-06-04

60/088167 60/088326 60/088033 60/088030

F1L1NG DATE: 1998-06-05

PRIOR

PRIOR PR1OR

F1LING DATE: 1998-00 APPLICATION NUMBER:

1998-06-04

APPLICATION NUMBER:

1998-06-04

FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER:

.998-06-04

60/088029

60/088028 60/088026

NUMBER:

1998-06-04

PRIOR

FILING DATE:

1998-06-10

60/088738 60/088734 60/088655 60/088217

1998-06-10 1998-06-09

APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-05 APPLICATION NUMBER: FIL1NG DATE: 1

F

LING DATE:

1998-06-10

60/088810

60/088824 60/088826

APPLICATION NUMBER:

FILING DATE: APPLICATION NUMBER:

1998-06-10

60/088742

APPLICATION NUMBER:

Ş B δÃ 61 GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118 ω •• Gaps

Conservative

Pred. No. 3e-, 9; Mismatches

42; 9;

Inde1s Length

2

124;

PRIOR PRIOR PRIOR PRIOR PRIOR

F1LING DATE: 1998-06 APPLICATION NUMBER:

1998-06-18

60/089947

APPLICATION NUMBER: 60/089908

PRIOR

FILING DATE: 1998-0 APPL1CATION NUMBER:

APPLICATION NUMBER: 60/089653 FILING DATE: 1998-06-17

FILING DATE: 1998-0 APPLICATION NUMBER:

1998-06-18

60/089907 60/089801 APPLICATION NUMBER: 60/089599 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089600 FILING DATE: 1998-06-17

FILING DATE: 1998-00
APPLICATION NUMBER:

FILING DATE: 1998-06-16
APPLICATION NUMBER: 60/089532
FILING DATE: 1998-06-17
APPLICATION NUMBER: 60/089538

APPLICATION FILING DATE: APPLICATION &

NUMBER: NUMBER:

60/089514 60/089512

1998-06-16

FILING DATE:

APPLICATION NUMBER: 60/089440

1998-06-16 1998-06-1 1998-06-11 1998-06-11 1998-06-11 1998-06-10 1998-06-10

F1L1NG DATE: APPLICATION NUMBER: APPLICATION NUMBER:

60/089105

60/088876

FILING DATE:

APPLICATION NUMBER: 60/089538 FILING DATE: 1998-06-17 APPLICATION NUMBER: 60/089598

NUMBER: 60/089598 1998-06-17

PRIOR

FILING DATE: APPLICATION NUMBER: FILING DATE:

NUMBER:

60/089952

1998-06-1

1998-06-19 1998-06-19

60/089948

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Вb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-990-562-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C16
                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Zhang, Zemin
TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and Nucleic
TITLE OF INVENTION: Acids Encoding the Same
                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION NUMBER: US/09/990,562
CURRENT FILING DATE: 2001-I1-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION NUMBER: 60/049787 PRIOR FILING DATE: 1997-06-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                       PRIOR
                                                                                                                                   PRIOR
                                                                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PPLICANT:
                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61
                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/075945 FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/062250 FILING DATE: 1997-I0-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WKYCI 123
                                                                                                                                              APPLICATION NUMBER: 60/087106 FILING DATE: 1998-05-28
                                                                                                                                                                                                   APPLICATION NUMBER: 60/
FILING DATE: 1998-04-28
                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                               FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/
FILING DATE: 1998-06-03
                                                                FILING DATE: 1998-06-02
                                                                             APPLICATION NUMBER:
                                                                                          APPLICATION NUMBER: FILING DATE: 1998-06
                                                                                                                     FILING DATE:
                                                                                                                                   APPLICATION NUMBER: 60/087607
                                                                                                                                                                         FILING DATE: 1998-05-07
                                                                                                                                                                                       APPLICATION NUMBER: 60/084600
                                                                                                                                                                                                                             FILING DATE: 1998-03-20
                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WKYCV
                        APPLICATION NUMBER: 60/088021
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       266,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ashkenazi, Avi J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Grimaldi, J.Christopher Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Goddard, Audrey
Godowski, Paul J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eaton, Dan L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Botstein,David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Williams, P. Mickey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Stewart,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Desnoyers, Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Application US/09990562
o. US20030027985A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Watanabe,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pan,James
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Kljavin,Ivar J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Napier, Mary A.
             DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Margaret Ann
art, Timothy A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nicholas F
                                                                                                                                                                                                                                                                                                     NUMBER: 60/065311
1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Daniel
                                                                                                                     1998-06-02
               1998-06-04
                                                                                           1998-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Colin K.
                                                                                                                                                                                                                                            60/078910
                                                                                                                                                                                                                 60/083322
                                                     60/087827
                                                                               60/087759
                                                                                                         60/087609
60/088025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                        PRIOR PRIOR
                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR
                                                                                 PRIOR
                                                                                                                                                   PR1OR
                                                                                                                                                                              PRIOR
                                                                                               PRIOR
                                                                                                              PRIOR
                                                                                                                         PRIOR
                                                                                                                                       PRIOR
                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                     RIOR
                                                                                                                                                                                                                                                                                                                                                                                  RIOR
                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RIOR
                                                                                                                                                                                                                                                                                                    RIOR
                                                                                                                                                                                                                                                                                                                              RIOR
```

PRIOR APPLICATION NUMBER: PRIOR FILING DATE: 1998-0 DR FILING DATE: 1998-06DR APPLICATION NUMBER: 6
DR APPLICATION NUMBER: 6
DR APPLICATION NUMBER: 6
DR FILING DATE: 1998-06DR APPLICATION NUMBER: 6
DR FILING DATE: 1998-06DR APPLICATION NUMBER: 6
DR APPLICATION NUMBER: 6
DR APPLICATION NUMBER: 6
DR APPLICATION NUMBER: 6 R APPLICATION NUMBER: 6
R FILING DATE: 1998-06
R FILING DATE: 1998-06
R FILING DATE: 1998-06
R FILING DATE: 1998-06 FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: 1998-06-04 APPLICATION NUMBER APPLICATION NUMBER: FILING DATE: 1998-06 APPLICATION NUMBER: 60/088026 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088028 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088826 FILING DATE: 1998-06-10 FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: 60/088217 APPLICATION NUMBER: FILING DATE: 1998-06 FILING DATE: FILING DATE: 1998-06-04 APPLICATION NUMBER: FILING DATE: 1998-01 APPLICATION NUMBER: APPLICATION NUMBER: 60/ FILING DATE: 1998-06-17 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: APPLICATION NUMBER: 60/0 FILING DATE: 1998-06-12 FILING DATE: 1998-06-1 APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: APPLICATION NUMBER: FILING DATE: 1998-06-16 FILING DATE: 1998-06-16 FILING DATE: томыЕR: 60/089538 : 1998-06-17 1998-06-10 1998-06-11 1998-06-10 1998-06-10 1998-06-10 1998-06-10 1998-06-09 1998-06-05 1998-06-05 I998-06-05 1998-06-04 1998-06-04 1998-06-16 1998-06-IJ NUMBER: 60/089952 1998-06-19 I998-06-18 1998-06-17 1998-06-17 1998-06-17 1998-06-17 1998-06-19 1998-06-19 1998-06-18 998-06-05 998-06-04 .998-06-18 60/088655 60/088326 60/088033 60/088030 60/088029 60/088738 60/088212 60/088202 60/089908 60/089653 60/089600 60/089532 60/089514 60/089512 60/089440 60/089105 60/088876 60/088858 60/088810 60/088742 60/088734 60/088167 60/089948 60/089947 60/089907 108680/09 60/089599 865680709 60/088861 60/088824

```
В
                                     Qγ
                                                                  Matches
                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                       PRIOR
               1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLOLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                                  & APPLICATION
& FILING DATE:
                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-07
                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                 APPLICATION NUMBER: 60/091978
                                                                                                                                                                                                   FILING DATE: 1998-07-02
                                                                                                                                                                                                              APPLICATION NUMBER:
                                                                                                                                                                                                                          FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/091544
                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/091478
                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/090862
MYKLASCCLLFTGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML 60
                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                       FILING DATE: 1998-07-02
                                                                                                                                                                                                                                                                 APPLICATION NUMBER: 60/091519
                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                             FILING DATE:
                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                   FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/090696 FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/1
FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE: 1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: 60/090557 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER: 60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/090540 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090472 FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: 60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE: 1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: 60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER:
                                                                            Similarity
                                                            Conservative
                                                                                                                 NUMBER: 60/
: 1998-07-09
                                                                                                                                             1998-07-07
                                                                                                                                                                        1998-07-07
                                                                                                                                                                                                                                                                                                          1998-07-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER: 60/
: 1998-06-22
                                                                                                                                                                                                                                                                                1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                         1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1998-06-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                .998-06-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-22
                                                                       43.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          998-06-
                                                                                                                                                                                                           60/091633
                                                                                                                             60/092182
                                                                                                                                                        60/091982
                                                                                                                                                                                                                                       60/091626
                                                                                                                                                                                                                                                                                                                                                 60/091360
                                                                                                                                                                                                                                                                                                                                                                            60/090863
                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090695
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       873060703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090254
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090246
                                                            19;
                                                                         Score 281.5;
Pred. No. 3e
                                                          Mismatches
                                                                     3e-22;
                                                                                 DB 9;
                                                        42;
                                                        Indels
                                                                                Length
                                                                                 124;
                                                    ω
••
                                                    Gaps
                                                    2
```

```
RESULT 15
US-09-997-428-266
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          맑
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ρ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          δÃ
                                                                                                                                    PRIOR
PRIOR
                                                                                                                                                                                            PRIOR
PRIOR
                                                                                                                                                                PRIOR
                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION NUMBER: 60/049787
PRIOR FILING DATE: 1997-06-16
PRIOR APPLICATION NUMBER: 60/062250
PRIOR FILING DATE: 1997-10-17
                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Secreted and Transmembrane Polypeptides and TITLE OF INVENTION: Acids Encoding the Same FILE REFERENCE: P2730P1C44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                         PRIOR
                                                                                                                                                                                                                                                     PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                             CURRENT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 266, A Publication No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     120 WKYCV 124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   119
APPLICATION NUMBER: 60/0
FILING DATE: 1998-06-03
                                                          APPLICATION NUMBER: 60/
FILING DATE: 1998-06-02
                              APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                      FILING DATE:
                                                                                                                  APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                            APPLICATION NUMBER: FILING DATE: 1998-0
                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: 60/065311
FILING DATE: 1997-11-13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13
                                                                                                       APPLICATION NUMBER:
                                                                                                                                              FILING DATE: 1998-05-07
                                                                                                                                                                                                     FILING DATE: 1998-03-20
                                                                                                                                                                                                                                    APPLICATION NUMBER: 60/075945
FILING DATE: 1998-02-25
                                                                                                                                                                                                                                                             FILING DATE: 1997-11-24
                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/066770
                                                                                                                                                                                                                                                                                                                        FILING DATE: 1997-11-12
                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 60/065186
                                                                                                                                                                                                                     APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/09/997,428 FILING DATE: 2001-11-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ashkenazi, Avi (
Baker, Kevin P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Zhang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Williams, P. Mickey
Wood, William I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Watanabe, Colin K
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Tumas,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Stewart, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Kljavin, Ivar J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gurney, Austin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Roy, Margaret
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Paoni, Nicholas F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Napier, Mary A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grimaldi, J.Christopher
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Godowski, Paul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Goddard, Audrey
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gerritsen, Mary E.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gerber, Hanspeter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Fong, Sherman
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ferrara, Napoleone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eaton, Dan
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Desnoyers,Luc
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Botstein, David
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Application US/09997428
5. US20030027162A1
                             1998-06-02
                                                                                      1998-06-02
                                                                                                                                                                          1998-04-28
                                                                                                                  1998-05-28
                                                                                                                                                                                                                                 1998-02-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zemin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Daniel
                60/087827
                                          60/087759
                                                                      60/087609
                                                                                                  60/087607
                                                                                                                                                          60/084600
                                                                                                                                60/087106
                                                                                                                                                                                      60/083322
                                                                                                                                                                                                                    60/078910
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Þ
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nucleic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       119
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                I18
```

APPLICATION NUMBER: 60/088025 FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/088026

APPLICATION NUMBER: FILING DATE:

FILING DATE:

1998-06-04 1998-06-04

60/088028

60/088029

APPLICATION NUMBER:

PRIOR

RIOR RIOR

PRIOR

1998-06-05

60/088202

PRIOR PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60/ FILING DATE: 1998-06-05

FILING DATE: APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: 1998-06-05

998-06-05

60/088217 60/088212

APPLICATION NUMBER: 60/088655

PRIOR

FILING DATE: 1998-08
APPLICATION NUMBER:
FILING DATE: 1998-08

FILING DATE: 1998-06-10
APPLICATION NUMBER: 60/088742
FILING DATE: 1998-06-10

APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-10

60/088824

60/088810

APPLICATION NUMBER:

FILING DATE:

1998-06-10

APPLICATION NUMBER: 60/088738

1998-06-10 1998-06-09

60/088734

FILING DATE: 1998-06-10 APPLICATION NUMBER: 60/088858 FILING DATE: 1998-06-11

APPLICATION NUMBER: 60/088826

PRIOR

APPLICATION NUMBER: APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: 1998-06-04

-90-8661

PRIOR

PRIOR

FILING DATE: 1998-06-04 APPLICATION NUMBER: 60/1 FILING DATE: 1998-06-04

60/088326 60/088033 60/088030

APPLICATION NUMBER: 60/088167

```
οy
 망
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR
                                                 Query Match
Best Local Similarity
Matches 61; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR
                                                                                                                                                                                                                                                                           PRIOR APPLICATE: 1990-V.
PRIOR FILING DATE: 1998-V.
PRIOR APPLICATION NUMBER:
1998-0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR
                                                                                                                                                                                                                                                                                                                                                        PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                                                                      PRIOR PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR
                                                                                                   PRIOR
PRIOR
PRIOR
                                                                                                                                                                                                                   PRIOR
PRIOR
                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION |
PRIOR FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                  PRIOR
                                                                                                                                                                              PRIOR
                                                                                                                                                     PRIOR
                                                                                                                                                                  PRIOR
                                                                                                                                                                                           PRIOR
                                                                                                                                                                                                      PRIOR
                                                                                                                                                                                                                                            PRIOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-06/
APPLICATION NUMBER: 60/
----- DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/090254
FILING DATE: 1998-06-22
                                                                                                   R APPLICATION NUMBER: 6
R FILING DATE: 1998-07-
R APPLICATION NUMBER: 6
R FILING DATE: 1998-07
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1998-06-24 APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: 60/
FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 1998-06-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE: 1998-06-22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                           FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: 60/090694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FILING DATE: 1998-08
APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICATION NUMBER: 60/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1998-06-24
                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 60/
FILING DATE: 1998-07-01
                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILING DATE: 1998-06-25
                                                                                                                                                              FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/0
FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/0
                                                                                                                                                                                                                                                                    APPLICATION NUMBER:
                                                                                                                                                                                                                  FILING DATE: 1998-07-02
APPLICATION NUMBER: 60/091626
                                                                                                                                                                                                                                                         FILING DATE: 1998-07-01
                                                                                                                                                        FILING DATE: 1
                                                                                                                                                                                                                                            APPLICATION NUMBER: 60/091519
Conservative
                                                                                                     NUMBER: 60/092182
: 1998-07-09
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1998-06-24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1998-06-24
                                                                                                                                                                                                                                                                                                                                                             1998-06-26
                                                                                                                                                 NUMBER: 60/091978
1998-07-07
                                                                                                                                                                                                                                                                                                                                     1998-06-26
                                                                                                                                                                                                                                                                                                                                                                                      1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                              1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                       1998-06-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1998-06-25
                                                                                                                                                                                                                                                                                  1998-07-02
                                                                                                                               1998-07-07
                                                                43.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090246
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  60/090429
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090349
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      60/090252
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60/090557
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              60/090542
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60/090535
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090472
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                60/090445
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60/090444
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          60/090431
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090355
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     60/090540
                                                                                                                                                                                                                                                                                                                                                                                                60/090696
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           60/090690
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   60/090678
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            60/090676
                                                                                                                                                                                                                                                                                                                                                                                                                          60/090695
                                                                                                                                          60/091982
                                                                                                                                                                                            60/091633
                                                                                                                                                                                                                                                                       60/091544
                                                                                                                                                                                                                                                                                              60/091478
                                                                                                                                                                                                                                                                                                                      60/091360
                                                                                                                                                                                                                                                                                                                                                60/090863
                                                                                                                                                                                                                                                                                                                                                                       60/090862
                                                    19;
                                                                 Score 281.5; DB pred. No. 3e-22;
                                                       Mismatches
```

PRIOR

PR10R PRIOR

FILING DATE:

1998-06-1

PRIOR PRIOR PRIOR

APPLICATION NUMBER: 60 FILING DATE: 1998-06-1 APPLICATION NUMBER: FILING DATE: 1998-0 APPLICATION NUMBER: FILING DATE: 1998-0

1998-06-17

60/089532

1998-06-16

60/089514

APPLICATION NUMBER:

60/089598 60/089538 APPLICATION NUMBER: 60/089440 FILING DATE: 1998-06-16 APPLICATION NUMBER: 60/089512 FILING DATE: 1998-06-16

APPLICATION NUMBER: 60/088876 FILING DATE: 1998-06-11 APPLICATION NUMBER: 60/089105

FILING DATE: 1998-06-

FILING DATE:

APPLICATION NUMBER: 60/088861

1998-06-11

60/088876

PRIOR

APPLICATION NUMBER: 6 FILING DATE: 1998-06-

PRIOR

APPLICATION NUMBER:

FILING DATE:

1998-06-17

60/089600 60/089599

PRIOR PRIOR

APPLICATION NUMBER: 60 FILING DATE: 1998-06-1

PRIOR PRIOR

FILING DATE:

1998-06-18 .998-06-18

60/089801 60/089653

APPLICATION NUMBER:

PRIOR PRIOR

APPLICATION NUMBER: FILING DATE: 1998-01 APPLICATION NUMBER:

DB 9; 42;

124; ω

Indels Length

Gaps 60

2

APPLICATION NUMBER: FILING DATE: 1998-0 FILING DATE: 1998-06-18

APPLICATION NUMBER: DATE:

60/089948 60/089947 60/089908 60/089907

1998-06-1 1998-06-1

FILING DATE APPLICATION

Searc Job t	DЬ	QУ	Db	Qу
Search completed: March 10, 2003, 17:48:54 Job time : 10.6405 secs	120 WKYCV 124	119 WKYCI 123	61 GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF 119	61 GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                   Database
                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Run
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq
Maximum DB seq
                                                                                                                                                                                                                                                                                                                                                                                                                                          Searched:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 on:
 Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
Score
                                                                                                                                                                                                                                                                                                                                                                                                length: 0
length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          March 10, 2003, 17:36:23; Search time 13.2973 Seconds (without alignments) 889.243 Million cell updates/sec
                                                                                                                                                                                                                                           Match Length DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-831-907A-33
641
                                                                                                                                                                                                                                                    Query
                                                                                                                                                                                                                                                                                                                 PIR_73:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
                                                                                                                                                                                                                                                                                                                                                                                                                                      283224 segs, 96134422 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1 MDRVPFCCLLFTGLLNPLLS.....TRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                            17.9
15.8
12.3
11.9
11.9
11.8
11.8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GenCore version 5.1.3 Compugen Ltd.
                              Gapext 0.5
                                                                                                            W1WLB2
T45746
                                                                                                                            A35622
T36248
F96937
T17215
                                                                                                                                                            в65025
E85892
                                                                                                                                                                                                                                           IJ
                                                                                                                                                                            A91048
                                                                                                                                                                                                                                                                   SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                        283224
                                                                                                                                 CDA peptide synthe cell wall-associat
                                                                                                                                                                hypothetical prote
probable 2-compone
hypothetical prote
                                                                                                                 El protein -
                                                                                                                                                 nuclear pore prote
                                                                                                                 hypothetical prote
El protein - bovin
                                                                                                                                                          hypothetical prote
                                                                                                                                                                                          hypothetical prote
El protein - bovin
                                                                                                                                                                                                         urotensin II-alpha translation initia
                                                                                                                                                                                                                        urotensin II-gamma
                                                                                                                                                                                                                                        Description
```

QQBE13 \$76433 \$10706 \$10706 \$22402 \$42533 \$11997 \$81905 A81111 \$07896

hypothetical prote probable sulfate a sulfate adenylyltr transcription fact

hypothetical prote BMRF1 protein - hu cation efflux syst

urotensin II precu hypothetical prote 2-aminobenzoate-Co

uroporphyrinogen I

F04030

hypothetical prote hypothetical prote glucan 1,4-alpha-g

Query Match

15.8%; Score 101.5; DB 2;

Length 125;

NADH2 dehydrogenas

```
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-523 <PRI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        R;Price, N.T.; Francia, G.; Hali, L.; Proud, C.G.
Biochim. Biophys. Acta 1217, 207-210, 1994
A;Title: Guanine nucleotide exchange factor for eukaryotic initiation factor-2. Cloning
A;Reference number: S42727; MUID:94153999; PMID:8110836
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Species: Oryctolagus cuniculus (domestic rabbit)
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       δÃ
                          QΥ
                                                                 В
                                                                                              QУ
                                                                                                                                                                                                                           A; Experimental source: C; Genetics:
                                                                                                                                                                                                                                                             A; Molecule type: mRNA
A; Residues: 1-391 <KOE>
A; Cross-references: EMBL: ALl17444
                                                                                                                                                                                                                                                                                                                                                                                                                  hypothetical protein DKFZp434B027.1 - human (fragment)
C;Species: Homo sapiens (man)
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Superfamily: translation regulator GCD2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: S42727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession: S42727
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   translation initiation factor eIF-2
Ъ
                                                                                                                                                                                                                                                                                                                A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                A; Reference number: Z18722
A; Accession: T17239
                                                                                                                                                                                                                                                                                                                                                                    submitted to the Protein
                                                                                                                                                                                                                                                                                                                                                                                    R; Koehrer,
                                                                                                                                                                                                                                                                                                                                                                                                    C; Accession: T17239
                                                                                                                                                                                                         A; Note:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                     Query Match
                                                                                                                                     Matches
                                                                                                                                                         Best Local Similarity
                                                                 187
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             101 LARTRKQ----HKQHGAAPECF 118
245 GRQGPRESQPSP 256
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18
                                 69
                                                                                                     22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                           DKFZp434B027.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the authors translated the codon AGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQ-NSNTVLSRL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYC1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LVAHPVTDTADMTYSGPDSVEEAGGVSPDDFAVSDLNDLLQRAAVVEYSPLLSRENIKVP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LLSLPVTDTGERTLQLPVLEED-----ALRALEELERMALLQTLRQTMGTEAGESP
                                GEAGPSTETPTP
                                                                                                   PVTDTGERT-----LQLPVLEEDALRALEELERMAL-----LQTLRQTMGTEAGESP 68
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VRKSERQQVPTRKDYGSKVSLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RAKQEAER----ALKQARKGEQGGPPPQASPSTAGEAPAGGKRLTEHTQADDPTLLRRL 158
                                                                 PNIPAGQQTVEIDLRHRIQLPDLENQ -- RNFNELSRIVLEVRERVRQEQQEGGHEAGEGR 244
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                    Beyer, A.; Mewes, H.W.; Gassenhuber, J.; Winhe Protein Sequence Database, September 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -- IPKEALRELLLEKPYRLIPPSGLWGSRRQFRKRGGGADCFWKYCV 125
                                80
                                                                                                                                                                                                                                            adult testis;
                                                                                                                                                       11.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   12.3%; Score 79; DB
31.7%; Pred. No. 6.8;
tive 11; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                24.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               180
                                                                                                                                       8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. 0.0086;
                                                                                                                                                       Score 76.5; D
Pred. No. 8.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   delta chain -
omestic rabbit;
                                                                                                                                     Mismatches
                                                                                                                                                                                                                                              cione
                                                                                                                                                                                                                                              DKFZp434B027
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        for residue
                                                                                                                                                                         DΒ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     rabbit
                                                                                                                                                                         2:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      35;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   #text_change 17-Nov-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 523
                                                                                                                                                                       Length 391;
                                                                                                                                       Indels:
                                                                                                                                                                                                                                                                                                                                                                                      Wiemann,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        370 as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ser,
                                                                                                                                       15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       residue 390
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
                                                                                                                                         ω
```

R;Hayashi, T.; Prac., gasawara, N.; Yasunaga, gasawara, R.; 11-22, 2001

T.; Makino, K.; Ohnishi, N.; Yasunaga, T.; Kuhara,

S ...

Kurokawa, K.; Shiba, T.; Ha

Hattori,

M.; Shinagawa,

Han,

and

Ishii,

genome sequence of enterchemorrhagic Escherichia coli 0157:H7

probable 2-component regulator [imported] - Escherichia coli (strain 0157:H
C;Species: Escherichia coli
C;Date: 18-Jul-2001 #sequence_revision 18-Jul-2001 #text_change 18-Jul-2001
C;Accession: A91048

Escherichia coli (strain 0157:H7,

A91048 RESULT 7

```
W1WLEB
El protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Cross-references: GB:X02346; GB:J02044; C;Superfamily: papillomavirus El protein C;Keywords: early protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: The primary structure and genetic organization of A;Reference number: A93289; MUID:83012974; PMID:6289124 A;Accession: A03663
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession: A03663
R;Chen, E.Y.; Howley, P.M.; Levinson, A.D.;
Nature 299, 529-534, 1982
                                                                                                                                                                                                                                                                                                                                                                R;Kawarabayasi, Y.; Hino, Y.; Horikawa, H.; Yamazaki, S.; Haikawa, Y.; Jin-no, K. awa, H.; Takamiya, M.; Masuda, S.; Funahashi, T.; Tanaka, T.; Kudoh, Y.; Yamazaki DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence of an aerobic hyper-thermophilic Crenarchaeon, A;Reference number: A72450; MUID:99310339; PMID:10382966
A;Accession: H72526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: bovine papillomavirus type 1
C;Date: 17-Dec-1982 #sequence_revision 17-Dec-1982 #text_change
                                                                                                                                                                                                                                                 A;Cross-references: DDBJ:AP000063; NID:g5105654; PIDN:BAA81200.1; A;Experimental source: strain K1 C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: DNA
A; Residues: 1-605 < CHE>
                                 S
S
                                                                         В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Date: 20-Aug-1999 #sequence_revision 20-Aug-1999 #text_change 20-Aug-1999
C;Accession: H72526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT
밁
                                                                                                                                                                                                                                   A; Gene:
                                                                                                                                                                                                                                                                                                              A; Residues: 1-111 <KAW>
                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                  A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #sequen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              hypothetical protein APE2189 - Aeropyrum pernix (strain Kl)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                         Matches
                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35 VLEEDALRALEELERMA----LIQTLRQTMGTEAGESPGEAGPSTETPTPR----GSMRKA 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           59 VFQGNHLEVFQALEKKAGEEQILNLKRKVLGSSQNSSGSEA---SETPVKRRKSGAKRRL 115
18
                                     73 -PSTETPTPRGSMRKAFAGQNSNTVLSRL 100
                                                                           21
                                                                                                               20 SLPVTDTGERTL-----QLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGEAG- 72
                                                                                                                                                                                                                                 APE2189
                                                                           SLPVSPRTSRTLSIAFSSSLLALRSLAPASMSFMARLMMLQTSLATLKSTGISSPSQAGI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FAENEANRYLTPLQVQGEGEGRQ 138
APST---SPSGETRTLPASMSTSRIFHTL 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FAGQNSNTVLSRLLARTRKQHKQ 110
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         24;
                                                                                                                                                       27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bovine papillomavirus type l
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11.9%;
28.9%;
                                                                                                                                                                           11.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16;
                                                                                                                                                         14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 76; DB Pred. No. 16;
                                                                                                                                                     Score 75.5; D
Pred. No. 2.6;
4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GB:M24622;
                                                                                                                                                                           2.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seeburg, P.H.
                                                                                                                                                                                               DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33;
                                                                                                                                                         37;
                                                                                                                                                                                             N
..
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GB: X00473;
                                                                                                                                                                                               Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          bovine papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NID: g60965;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        28-Jul-2000
                                                                                                                                                         11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           10;
                                                                                                                                                                                                                                                                                              PID:d1044986; PID:g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Y.; Yamazaki,
                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PIDN:CAB4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
                                                                                                                                                           Ψ
                                                                                                                                                                                                                                                                                                                                                                                                                  Aero
```

- 1

4)

```
C;Species: Escherichia coli
C;Date: 16-Feb-2001 #sequence_revision 16-Feb-2001 #text_change 14-Sep-2001
C;Accession: E85892
C;Accession: E15892
R;Perna, N.T.; Plunkett III, G.; Burland, V.; Mau, B.; Glasner, J.D.; Rose, iller, L.; Grotbeck, E.J.; Davis, N.W.; Lim, A.; Dimalanta, E.; Potamousis,
                                                                                A;Title: Genome sequence of enterohemorrhagic Escherichia coli 0157:H7 A;Reference number: A85480; MUID:21074935; PMID:11206551 A;Recession: E85892 A;Status; preliminary
                     A;Cross-references:
A;Experimental source
                                                   A; Molecule type: DNA
A; Residues: 1-679 <STO>
                                                                                                                                                                                                                                                                    hypothetical protein hyfR [imported] - Escherichia coli (strain 0157:H7, substrain C;Species: Escherichia coli
                                                                                                                                                                                                                                                                                                                                                                                        B
                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: GB:AE000335; GB:U00096; NID:g1788821; PIDN:AAC75544.1; PID:g1788836; A;Experimental source: strain K-12, substrain MG1655 C;Superfamily: RNA polymerase sigma factor interaction domain homology c;340-562/Domain: RNA polymerase sigma factor interaction domain homology
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          R;Blattner, F.R.; Fiu. A.; Rose, D.J.; Mau,
                                                                                                                                                                                                                                                                                                              E85892
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: The complete genome sequence of Escherichia coli K-12 A;Reference number: A64720; MUID:97426617; PMID:9278503 A;Accession: B65025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Science 277, 1453-1462, 1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Species: Escherichia coli
C;Date: 12-Sep-1997 #sequence_revision 17-Sep-1997 #text_change 01-Mar-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Status: preliminary; nucleic acid sequence not shown; translation not
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      hypothetical protein b2491 - Escherichia coli (strain K-12)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DЬ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Residues: 1-663 <BLAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      B65025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C; Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:BA000007; PIDN:BAB36776.1; PID:913362823; GSPDB:GN00154
A;Experimental source: strain O157:H7, substrain RIMD 0509952
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Molecule type: DNA
A; Residues: 1-663 <HAY>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Gene:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Reference number: A; Accession: A91048
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                  634 PRGAATR--LGMKRTTLLSRM 652
                                                                                                                                                                                                                                                                                                                                                                                                                                                       588 LPTINEDSALRSSMAQLLHPTTPENDEEERQRIVQVLRETNGIVAG--------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  634
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 588 LPTLNEDSALRSSMAQLLHPTTPENDEEERQRIVQVLRETNGIVAG---
                                                                                                                                                                                                                                                                                                                                                                                                                        80 PRGSMRKAFAGQNSNTVLSRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          33 LPVLEED-ALRAL-------EELERMALLQTLRQTMGTEAGESPGEAGPSTETPT 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
les 26; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                \frac{3}{3}
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ECs3353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRGAATR - - LGMKRTTLLSRM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LPVLEED-ALRAL------EELERMALLQTLRQTMGTEAGESPGEAGPSTETPT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRGSMRKAFAGONSNTVLSRL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F.R.; Plunkett III, G.; Bloch, C.A.; Perna, N.T.; Burland, D.J.; Mau, B.; Shao, Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     26;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         B65025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Similarity
                   source: strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
     GB:AE005174; NID:g12516876; PIDN:AAG57601.1; GSPDB:GN00145; UWGP:z37
ce: strain O157:H7, substrain EDL933
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A99629; MUID:21156231; PMID:11258796
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       11.8%;
32.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               11.8%;
32.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            652
                                                                                                                                                                                                                                                                                                                                                                                                                        100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 75.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 75.5;
Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ed. No. 19;
Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 663;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        V.; Riley, M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   633
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      79
                                                                                                                                                                              D.J.;
K.; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4:
                                                                                                                                                                                Apodaca
                                                                                                                                                                                                Mayhe
                                                                                                                                                                                                                                                                            EDL9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            გ
CDA peptide synthetase I - Streptomyces coelicolor C;Species: Streptomyces coelicolor C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 C;Accession: T36248
                                                                                RESULT
T36248
                                                                                                                                                            Вb
                                                                                                                                                                                            δÃ
                                                                                                                                                                                                                                                                      20
                                                                                                                                                                                                                                                                                                                                                                                          A; Map position: 15R
C; Superfamily ....
                                                                                                                                                                                                                                     Ъ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Davis,
Cell 61,
                                                                                                                                                                                                                                                                                                                                                                                                                             A; Cross-references:
                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Gene: SGD: NUP1; MIPS: YOR098c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Molecule type: DNA
A; Residues: 1-1076 < VOS>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
A; Residues: 1-1076 <BEN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Title: The NUP1 gene encodes an essential A;Reference number: A35622; MUID:90275616; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C;Genetics:
A;Gene: hyfR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Accession: S66983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Reference number: S66965
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Molecule type: DNA
A; Residues: 1-1076 < DAV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C;Species: Saccharomyces cerevisiae C;Date: 22-Jan-1993 #sequence_revis:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          N; Alternate names: nucleoporin; protein 03182;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QΥ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A; Reference number: S61643
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Experimental source: strain S288C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Accession: A35622
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Accession: A35622; S61658;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DЬ
                                                                                                                                                                                                                                                                                                                                                                                    Superfamily: nuclear pore protein NUP1
                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                            152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    641
                                                                                                                                                                                                73
                                                                                                                                                                                                                                                                                                                                 Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    965-978,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      L.I.; Fink,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRGAATR -- LGMKRTTLLSR 658
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRGSMRKAFAGQNSNTVLSR
                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S61658
                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1990
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         11.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99
                                                                                                                                                                                                                                                                                                            18;
                                                                                                                                                                                                                                                                                                                             No.
```

```
A;Cross-references: EMBL:Z75006; NID:g1420274; PIDN:CAA99295.1; PID:g1420275; GSPDB:GA;Experimental source: strain S288C
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:X94335; NID:g1262139; PIDN:CAA64020.1; R;Voss, H.; Benes, V.; Rechmann, S.; Teodoru, C.; Schwager, C.; Submitted to the Protein Sequence Database, July 1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  R;Benes, V.; Andrade, M.A.; Rechmann, S.; Teodoru, C.; Banrevi, A.; Sander, C.; Valen submitted to the EMBL Data Library, December 1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Description: Nucleotide sequence and analysis of a 130 kb
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: EMBL:M33632; NID:g172055; PIDN:AAA34822.1; PID:g172056
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nuclear pore protein NUP1 - yeast (Saccharomyces cerevisiae)
                                                                                                                                                                                                                                                                                                      24 TDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTE------AGESPGEAG- 72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                595 LPTLNEDSALRSSMAQLLHPTTPENDEEERQRIVQVLRETNGIVAG----
                                                                                                                                                               SYLCTSSTPSPIKNGSCTRQLAGKSGEDTNVGLPILKSLKNRSNRK-RFHSQSKGTVW 208
                                                                                                                                                                                                          -----PSTETPTPRGSMRKAFAGQNSN-----TVLSRLLARTRKQHKQHGAAPECFW 119
                                                                                                                                                                                                                                                        TENTERPPLLPILPIQRLRLLREKQRVRNMRELGLIQSTEFPSITSSVILGSQSKSDEGG 151
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LPVLEED-ALRAL------EELERMALLQTLRQTMGTEAGESPGEAGPSTETPT 79
#sequence_revision 03-Dec-1999 #text_change
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SGD:S0005624; MIPS:YOR098c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               #sequence_revision 08-Mar-1996 #text_change 21-Jul-2000
; S61658; S66983
                                                                                                                                                                                                                                                                                                                                                                                        11.5%; Score 73.5;
23.7%; Pred. No. 53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 73.5;
Pred. No. 31;
                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PMID:2190694
                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             protein
                                                                                                                                                                                                                                                                                                                                                           49;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2
                                                                                                                                                                                                                                                                                                                                                                                                         Length 1076;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 679;
                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             YOR098c;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  fragment of yeast chromos
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               yeast nuclear pore
                                                                                                                                                                                                                                                                                                                                                           23;
01-Dec-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PID:g1164945
Paces, V.; A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 29;
                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ansorge,
                                                                                                                                                                                                                                                                                                                                                      4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               comp1
```

```
C;Superfamily: acetate-CoA llgase homology; acyl carrier protein homology C;Keywords: carrier protein; phosphopantetheine; phosphoprotein F;516-1074/Domain: acetate-CoA llgase homology #status atypical <ACL1> F;1090-1158/Domain: acyl carrier protein homology <ACL2> F;1715-2184/Domain: acetate-CoA ligase homology <ACL2> F;2000-2268/Domain: acetate-CoA ligase homology <ACC2> F;2000-3249/Domain: acetate-CoA ligase homology <ACC2> F;2000-3249/Domain: acetate-CoA ligase homology <ACC3> F;2000-3249/Domain: 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Saunder, D.C.; Harris, D.; Bentley, S.D.; Parkhill, J.; Barrell, B.G.; Rajandream, M. submltted to the EMBL Data Library, March 1999
A;Reference number: Z21602
A;Accession: T36248
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            cell wall-associated hydrolase [lmported] - Clostridium acetobutylicum C;Specles: Clostridium acetobutylicum C;Date: 14-Sep-2001 #soccore
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         F;5802-5870/Domaln: acyl carrier protein homology <ACP5>
F;6401-6868/Domaln: acetate-CoA ligase homology <ACP6>
F;6884-6951/Domaln: acyl carrier protein homology <ACP6>
F;1122,2232,3297,4794,5834,6916/Binding site: phosphopantetheine (Ser) (covalent) #statu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;3265-3332/Domain: acyl carrier protein homology <ACP3>
F;4323-4746/Domain: acetate-CoA ilgase homology <ACP4>
F;4762-4830/Domain: acyl carrier protein homology <ACP4>
F;5363-5786/Domain: acetate-CoA ligase homology <ACL5>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C;Genetlcs:
A;Gene: cdaPSI; SCOEDB:SCE63.03c
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Molecule type: DNA
A; Residues: 1-7463 <SAU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .; Daly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R. J. Bacterlol. 183, 4823-4838, 2001
A;Tltle: Genome Sequence and Comparative Analysis of the A;Reference number: A96900; MUID:21359325; PMID:21359325 A;Accession: F96937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       R;Nolllng, J.; Breton, G.; Omelchenko, M.V.; Markarova, K.S.; Zeng, Q.; Gibson, .; Daly, M.J.; Bennett, G.N.; Koonin, E.V.; Smith, D.R.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      γQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Experlmental source: straln A3(2)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:AL035640;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Status: preliminary; translated from GB/EMBL/DDBJ
hypothetical pro
C; Specles: Homo
                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 1-392 <KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A, Experimental source:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A;Cross-references: GB:AE001437; PIDN:AAK78289.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Status: prellmlnary
                                                                                           T17215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Date: 14-Sep-2001 #sequence_revision 14-Sep-2001 #text_change 14-Sep-2001 Accession: F96937
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Genetics
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Slmllarity
                                                                                                                                                                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2770 LAVETAGAAAPGGALTYGELNERANRLARALLAR------GAGPERF 2810
                                                                                                                                                                                                                                                       230 VKAEKDAEKAAAQARLVAAANTAASSAPAKAVAKAQAPIPRGVSHSSFAGSGNDVV 285
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          11 FIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTMGTEAGESPGE 70
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          71 AGPSTE-TPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                         41 LRALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTV 96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CAC0308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FLRLLDALVADPSRRIGDVDVLGPRERERVLTEWNDTPRRPVQGTFADHVARHAAERPGH 2769
                                       proteln DKFZp434H2235.1 -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Simliarity
    sapiens (man)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium acetobutylicum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        11.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11.4%;
28.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                    11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     14; Mlsmatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 73; DB
Pred. No. 19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 73.5; DB 2; pred. No. 4.7e+02;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PIDN:CAB38518.1; GSPDB:GN00070; SCOEDB:SCE63.03c
                                                                                                                                                                                                                                                                                                                                                                                                                                    Mlsmatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2; Length 392
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PID:g15023151; GSPDB:GN00168
ATCC824
                                                                                                                                                                                                                                                                                                                                                                                                                                        29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 7463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Solvent-Producing Bacterium Cl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2
                                                                                                                                                                                                                                                                                                                                                                                                                                        0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                R.; Lee
```

```
C;Date: 15-Oct-1999 #sequence_revision 15-Oct-1999 #text_change 15-Oct-1999 C;Accession: T17215 R;Poustka, A.; Klein, M.; Mewes, H.W.; Gassenhuber, J.; Wlemann, S. submitted to the Protein Sequence Database, September 1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Molecule type: mRNA
A; Residues: 1-429 < POU>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A;Molecule type: DNA
A;Residues: 1-620 <GRO>
A;Cross-references: GB:M20219; GB:M19551; NID:g332996
A;Cross-references: GB:M20219; GB:M19551; NID:g332996
C;Superfamily: papillomavirus E1 protein
C;Keywords: early protein; glycoprotein
C;Keywords: early protein; glycoprotein
f;72,109,173/Binding site: carbohydrate (Asn) (covalent) #status
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A; Accession: T17215
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Reference number: Z18723
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    R;Groff, D.E.; Mitra, R.; Lancaster, W.D. submitted to GenBank, May 1988 A;Reference number: A94519 A;Accession: C31169
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          El protein - bovine papillomavirus type C; Species: bovine papillomavirus type 2 C; Date: 31-Mar-1989 #sequence_revision 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT
W1WLB2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A; Note: DKFZp434H2235.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Experimental source: adult
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A; Cross-references: EMBL: AL117404
                                                                                                                                                                                                                                                                                                                                                                                                                 δõ
                                                                                                                                                                                                                                                                                                                                                                                                                                                            В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              δÃ
                                                           A; Molecule type: DNA
A; Residues: 1-968 < VIT>
                                                                                                                    A; Reference number: Z23012
A; Accession: T45746
                                                                                                                                                               R;Vitale, D.; Liguori, R. submitted to the Protein
                                                                                                                                                                                                   C; Accession: T45746
                                                                                                                                                                                                                            C;Species: Arabidopsis thaliana (mouse-ear cress) C;Date: 04-Feb-2000 #sequence_revision 04-Feb-2000
                                                                                                                                                                                                                                                              hypothetical protein F24M12.190 - Arabidopsis thaliana
                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Accession: C31169
                A; Experimental source:
                                      A; Cross-references: EMBL: AL132980
                                                                                                   A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           320
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           260
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                35 VLEEDALRALEELERMA----LLQTLRQTMGTEAGESPGEAGPSTETPTPR---GSMRKA 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Local Similarity
les 23; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                   88 FAGQNSNTVLSRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                         75 VFQGNHLEVFQALEKKAGEEQLLNLKRKVLGSSENSSGSEA---SETPAKRQKAGAKRRL 131
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ERQPQVDMLQEISNSLLIKGHGEDCIEAEEKVHVIEKKLKQLREQVSQDLMALQGTQNPA 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SPLPSFDEVDSGDQPPATSVPAPRAKFRAVRTTEGEEETESRVPGSTRPQ 369
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SP-----GEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQ 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ERTLQLPVLE------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity
27; Conserv
                                                                                                                                                                                    Liguori, R.; Flores, M.; Argiriou, A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                     cultivar Columbia; BAC clone F24Ml2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.4%;
                                                                                                                                                               Sequence Database,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       testis; clone DKFZp434H2235
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; Score 73; DB 1; Length 620; Pred. No. 32; 13; Mismatches 27; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ·EDALRALEELE------RMALLQTLRQTMGTEAGE 66
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 73;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              31-Mar-1989 #text_change 12-Jun-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DВ
21;
                                                                                                                                                                     December
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                41;
                                                                                                                                                                                                                               #text_change 04-Feb-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 429
                                                                                                                                                                     De Slmone,
1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                        ۷.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                30;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   predicted
                                                                                                                                                                                             Mewes, H.W.; Lemo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ω
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ω
```

```
A:Map Position: 3
A:Introns: 69/1; 99/1; 132/3; 170/3; 198/1; 220/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 170/3; 198/1; 220/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 170/3; 198/1; 220/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 170/3; 198/1; 220/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 170/3; 198/1; 220/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 170/3; 198/1; 20/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 170/3; 198/1; 20/3; 20/3; 10/3; 20/3; 10/3; 20/3; 10/3; 20/3; 10/3; 20/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 20/3; 10/3; 20/3; 10/3; 20/3; 10/3; 20/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 20/3; 10/3; 20/3; 10/3; 20/3; 10/3; 20/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 20/3; 10/3; 20/3; 10/3; 20/3; 10/3; 20/3; 242/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 20/3; 10/3; 20/3; 10/3; 20/3; 242/3; 284/2; 396/3; 441/3; 514/1; 81
A:Introns: 69/1; 99/1; 132/3; 10/3; 20/3; 10/3; 20/3; 10/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/2; 20/3; 242/3; 20/3; 242/3; 20/3; 242/3; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2; 20/3; 242/2;
```

THIS PAGE BLANK (USPTO)

?

```
Result
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Database
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Maximum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Searched
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Run on:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Title
            Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB seq length: 0
DB seq length: 2000000000
                                                                                                                                                                                                            69.5
69.5
69.5
68.5
68.5
68.5
68.5
68.5
68.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  protein search, using
         17.9
15.8
112.7
112.3
111.8
111.8
111.4
111.4
111.5
111.2
111.2
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
111.3
11.3
11.3
11.3
11.3
11.3
11.3
11.3
11.3
11.3
11.3
11.3
11.3
11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Match Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            112892 seqs, 41476328 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 , Gapext 0.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-831-907A-33
641
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 March 10, 2003, 17:26:37; Search time 6.98108 Seconds (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         84.4
44.7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SwissProt_40:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MDRVPFCCLLFIGLLNPLLS.....TRKQHKQHGAAPECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                    DB
                                                 CLUS_COTJA
GIC2_YEAST
                                                                                              NDF1_CHICK
PAX6_HUMAN
PAX6_MOUSE
                                                                                                                                                                         SYFA_TREPA
IP3L_HUMAN
                  CBP1_CAEEL
F8I2_HUMAN
                                                                                                                                                                                                                                                                UR2_PLAFE
SUMT_SYNP7
                                                                             PAX6_BRARE
                                                                                                                                         OCT1_PIG
                                                                                                                                                                                                                                                                                                                               NUP1_YEAST
ACCO_ACTCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UR2_MOUSE
UR2_RAT
                                                                                                                                                          OCT1_HUMAN
                                                                                                                                                                                                       BCK1_YEAST
                                                                                                                                                                                                                     PAX6_ORYLA
                                                                                                                                                                                                                                                 OCT1_XENLA
                                                                                                                                                                                                                                                                                                                                                             VE1_BPV1
HYFR_ECOLI
                                                                                                                                                                                                                                                                                                                                                                                           E2BD_HUMAN
E2BD_RABIT
                                                                                                                                                                                                                                                                                                                                                                                                                           UR2_RANRI
UR2A_CYPCA
                                                                                                                                                                                                                                                                                                  EAD_EBV
                                                                                                                                                                                                                                                                                                                 VE1_BPV2
                                                                                                                                                                                                                                                                                                                                                                                                                                                         UR2G_CYPCA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UR2_HUMAN
                                                                                                                                                                                                                                      RAT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUMMARIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     mode1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 730.773 Million cell updates/sec
                                 Q06648
P34545
                                                                                                                         P14859
Q29076
P79765
                                                                                                                                                                                                                   054842
073917
                                                                                                                                                                                                                                                                P21857
P42451
                                                               P14018
                                                                                                                                                                                                    Q01389
                                                                                                                                                                                                                                                                                                                                                                                        Q9ui10
P41111
                                                                                                                                                                                                                                                                                              P03191
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Q9qzq3
                                                                                                                                                                                                                                                                                                                                                                                                                        P04560
                                                                                                                                                                                                                                                                                                                                                                                                                                                      P06580
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Description
                                                                                                                                    homo sapien
homo sapien
sus scrofa
                                                                                                                                                                                                                                                                                                                                                        bovine papi
escherichia
                                                                                                                                                                                                                                                                                                                                                                                                                                 homo sapien
cyprinus ca
rana ridibu
homo sapien mus musculu
                                             saccharomyc
                                                                          mus musculu
brachydanio
                                                                                                                      gallus gall
                                                                                                                                                                                                                                                                            epstein-bar
platichthys
                                                                                                                                                                                                                                                                                                                          saccharomyc
actinidia c
                                                          coturnix co
                                                                                                                                                                                  saccharomyc
treponema p
                                                                                                                                                                                                                oryzias lat
                                                                                                                                                                                                                                  rattus norv
                                                                                                                                                                                                                                              xenopus lae
                               caenorhabdi
                                                                                                         homo sapien
                                                                                                                                                                                                                                                              synechococc
                                                                                                                                                                                                                                                                                                          bovine papi
                                                                                                                                                                                                                                                                                                                                                                                                      homo sapien
                                                                                                                                                                                                                                                                                                                                                                                                                      cyprinus ca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  mus musculu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    rattus
```

Qy Вþ Qy

_

61 GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK 120

MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERNALLQTLRQTM 60

Query Match
Best Local Similarity
Matches 123; Conser

Conservative

100.0%; Score 641; DB 1; 100.0%; Pred. No. 5.9e-55; cive 0; Mismatches 0;

Length 123; Indels

0;

Gaps

0;

•			-	•
CCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCCC	C C C C C C C C R R R R R R R R R R R R	R O O O O O D D D D D D D D D D D D D D	RESU UR2_ ID	
between the the tropean in use by non-in modified and entities required or send an emandle of the tropean in the European in the send an emandle of the tropean in the send and entities with the send and entities with the send and entities in the send and entities in the send and entities and entities and entities and entities in the send entities and entitle entities and entitle entities and entities and entities and entitle entitle entities and entitle entitle entitle entitle entitle entitle entitle entities and entitle	SEQUE TISSU MEDLI COULC COULC TEBS FEBS FEBS FEBS FEBS FEBS FEBS FEBS F	Q9QZQ3; 16-OCT 16-OCT 15-JUN Urotens: UTS2. Mus musc Eukaryot Mammalia	RESULT 1 UR2_MOUSE ID UR2_N	34 35 36 37 37 38 39 39 41 41 42 42 44 44 44 44 44
ween the European by non-ities required and ities required and ities required and ities required and ities required and embedding and embedding properties of the properties o	NCE FF NE-994 NE-994 ing, s rotens Lett. UNCT1C UNCT1C UNCT1C UNCT1C UNCT1C UNCT1C UNCT1C UNCT1C	ZQ3; CT-2001 JUN-2002 JUN-2002 Lensin II 2 musculus aryota; Me halia; Eut	MOUSE	66.55 66.55 66.55 66.55 65.55
between the Swiss Institute of Bioinforma the European Bioinformatics Institute. Thuse by non-profit institutions as long modified and this statement is not removed entitles requires a license agreement (see or send an email to license@isb-sib.ch). EMBL, AF172175; AAD55767.1; MGD; MGI:1346329; Uts2. InterPro; IPR001483; Urotensin_II. PF02083; Urotensin_II; 1. PROSITE; PS00984; UROTENSIN_II; 1. PROSITE; PS00984; UROTENSIN_III; 1. PROSITE; PS00984; UROTENSIN_III; 1. PROPIDE 10 10 123 UROTENSIN_II. DISULFID 110 123 UROTENSIN_II. DISULFID 117 122 BY SIMILARITY. SEQUENCE 123 AA; 13625 MW; F96486195137	SEQUENCE FROM N.A. 2 TISSUE-Spinal cord; 2 MEDLINE-99416011; PubMed=10486557; 2 Coulouarn Y. Jegou S. Tostivint H., Vaudry H., Lihrm 2 Coulouarn Y. Jegou S. Tostivint H., Vaudry H., Lihrm 2 Coulouarn Y. Jegou S. Tostivint H., Vaudry H., Lihrm 2 Coulouarn Y. Jegou S. Tostivint H., Vaudry H., Lihrm 2 Coulouarn Y. Jegou S. Tostivint H., Vaudry H., Lihrm 2 Croning, sequence analysis and tissue distribution of 2 rat urotensin II precursors."; 2 rebs Lett. 457:28-32(1999). 3 Lett. 457:28-32(1999). 4 FEBS Lett. 457:28-32(1999). 4 FEBS Lett. 457:28-32(1999). 4 FEBS Lett. 457:28-32(1999). 5 Lett. 457:28-32(1999). 6	(Re1 (Re1 (Re) (Re) (Mo (Mo etaz her		10.5 10.4 10.4 10.3 10.3 10.3 10.3 10.3 10.2 10.2
wiss Institute in informatics Informatics Institute in its statement in statement i	d; PubMe Ou S., e anal e anal -32(19 -32(19 -32(17) CATIO CATIO ICITY: F THE ELONGS		TANDARD	739 292 292 207 391 391 546 646 646 646 641 610 339
itute on thics in thics in thics in thics in thics in thick in the second is also a second in thick in the second in thick in the second in th	d=1048 Tosti Tosti Tosti Sors." 99). TENT V TENT V REALINS BRAINS TOTH	re ass ass ard rd		
Institute of Bioinformatics formatics Institute. There are institutions as long as it statement is not removed. Usa license agreement (See http: license agreemen	6557; vint H nd tis ; ASOCON reted. -SPECI -SPECI TEM AN E UROT	quenc quenc (UIJ (Crar Sciu	ALIC	OCT1_CHICK CGD3_HUMAN IE68_HSV11 FM2_BORPE P53_RAT P2CG_HUMAN UVRB_METTH PAX6_COTIN Y328_MYCPN TMF1_HUMAN HRDC_STRCO
informatic Thirty Company of the Com	., Vau sue di STRICT STRICT D SPIN ENSIN		ALIGNMENTS	_CHICK _HUMAN _HSV11 BORPE _RAT _HUMAN _HUMAN _COTJA _BOVIN _MYCPN _HUMAN _HUMAN _HUMAN
matics matics There a g as i ed. Us ee http I I I I I I I I I I I I I I I I	udry H., Lihr istribution o TOR (BY SIMIL PREDOMINANTLY NAL CORD. 2 FAMILY.	date) ipdate) Vertebi	AA.	
Loward the close and the re are no r sits conte by other large by other large by other large lar	LY.	e) tebrata; l		
res ent isb	ann the	Euteleos Murinae		P151. P30444 P057! P057! P103 O153 O2653 O472: P4772: P567: P567: P567: P567: P567: P567: P567:
MBL is is ib	mous	e;		143 281 788 861 861 835 722 810 810
1 20004	SED IN	tomi;		gallus homo sa herpes bordete rattless homo sa methano coturni bos tau mycopla homo sa strepto
itstations on interest of the no commerce h/announ	and	•		us seeke eeke chic chic chic chic chic chic chic chi
anoration as ration is ration is ration is an its on its no way ommercial announce/				gall spien simp illa norv pien bbact x co rus sma pien

```
URZ_RATI
ID URZ_
AC 090Z
AC 000Z
AC 000Z
AC 00C
AC 0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           В
                                                                                                                                                       S
                                                                                                                                                                                                        В
                                                                                                                                                                                                                                               Ş
                                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                        8
                                                                                                               В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          UR2_RAT

UR2_RAT

090Z04;

f 16-OCT-2001 (Rel. 40, Created)

T 16-OCT-2001 (Rel. 40, Last sequence updat

T 16-OCT-2001 (Rel. 40, Last annotation up

"" > +ensin II precursor (U-II) (UII).
  Ę
                  UR2_HUMAN
                                            RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                Query Match
Best Local
                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Coulouarn Y., Jegou S., Tostivint H., Vaudry H., Lil
"Cloning, sequence analysis and tissue distribution
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Spinal cord; MEDLINE-99416011; PubMed-10486557;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROPEP
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             rat urotensin II precursors.";
FEBS Lett. 457:28-32(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=10116
UR2_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DISULFID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF02083; Urotensin_II;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF172174; AAD55766.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       121
                                                                                                               121
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   61
                                                                                                                                                            121
                                                                                                                                                                                                        61
                                                                                                                                                                                                                                                      61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ween the Swiss Institute of Bioinforma
European Bioinformatics Institute. The
by non-profit institutions as long
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FUNCTION: HIGHLY POTENT VASOCONSTRICTOR (BY SUBCELLULAR LOCATION: Secreted.
TISSUE SPECIFICITY: BRAIN-SPECIFIC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 YCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           YCI 123
                                                                                                                                                              YCI 123
                                                                                                                                                                                                                                                                                                                          MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDALRALEELERMALLQTLRQTM 60
                                                                                                               YCI
                                                                                                                                                                                                                                                      GTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWK 120
                                                                                                                                                                                                                                                                                                MDRVPFCCLLFVGLLNPLLSFPVTDTGEMSLQLPVLEENALRALEELERTALLQTLRQTV
                                                                                                                                                                                                          GTEAEGSLGQADPSAETPTPRGSLRKALTGQDSNTVLSRLLARTRKQRKQHGTAPECFWK
                                                                                                                                                                                                                                                                                                                                                                                             104;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       123
                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cleavage on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and this statement is not removed.
                                                                                                               123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PS00984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21
110
117
117
                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AA;
  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           UROTENSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20
104
123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Rodentia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        13614 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                     84.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 pair of basic residues;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of Bioinformatics and the EMBL outstation
Institute. There are no restrictions on it
tions as long as its content is in no wa
                                                                                                                                                                                                                                                                                                                                                                                                                     Score 541; DB 1;
Pred. No. 2.4e-45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                UROTENSIN II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
  PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E4F1A8EE124AF1EA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123
  124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  B
  A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Muridae; Murinae; Rattus
                                                                                                                                                                                                                                                                                                                                                                                                12;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Usage
                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 123;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Lihrmann I.;
                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the mouse
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         for
                                                                                                                                                                                                                                                                                                                                                                                                  0
                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         commercial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                  0
```

Š

```
THE TEST OF REAL PROPERTY OF THE TEST OF THE OF T
                                                                           Query Match
Best Local Similarity
Matches 62; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-99427933; PubMed-10499587;
Ames R.S., Sarau H.M., Chambers J.K., Willette R.N., Alyar N.V.,
Ames R.S., Sarau H.M., Chambers J.K., Sauermelch C.F., Coatney R.W.,
Romanic A.M., Louden C.S., Foley J.J., Sauermelch C.F., Coatney R.W.,
AO Z., Disa J., Holmes S.D., Stadel J.M., Martin J.D., Liu W.-S.,
Glover G.I., Wilson S., McNulty D.E., Ellis C.E., Elshourbagy N.A.,
Shabon U., Trill J.J., Hay D.W.P., Ohlstein E.H., Bergsma D.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  095399; 09UKP7;
16-0CT-2001 (Rel. 40, Created)
16-0CT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  human reveals intense expression of the urotensin II motoneurons of the spinal cord."; proc. Natl. Acad. Sci. U.S.A. 95:15803-15808(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Coulouarn Y., Lihrmann I., Jegou S., Anouar Y., Tostivint H. Beauvillain J.C., Conlon J.M., Bern H.A., Vaudry H.; "Cloning of the cDNA encoding the urotensin II precursor in
                                                                                                                                                                               CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Submitted (DEC-1999) to the EMBL/GenBank/DDBJ data i. FUNCTION: HIGHLY POTENT VASOCONSTRICTOR.
I. SUBCELLULAR LOCATION: Secreted.
I. TISSUE SPECIFICITY: BRAIN-SPECIFIC.
SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Human urotensin-II is a potent vasoconstrictor and orphan receptor GPR14.";
Nature 401:282-286(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-Spinal cord;
MEDLINE-99080095; PubMed-9861051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Eukaryota; Metazoa;
Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF104118; AAD13070.1; -. EMBL; AF140630; AAD55577.1; -. EMBL; Z98884; CAB63148.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Douglas S.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pearce
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                       PROPEP
                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF02083;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MIM; 604097;
                                                                                                                                                                                                                                                           CONFLICT
                                                                                                                                                                                                                                                                                     DISULFID
                                                                                                                                                                                                                                                                                                                  PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                           Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genew;
HGNC:12636; UTS2
                                                                                                                                                                                                                                                                                                                                                                                         Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                        PS00984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             II precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IPR001483; Urotensin_II.
                                                                                                                                                                                    124
                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                              24
                                                                                                                                                                                    AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chordata;
Primates;
                                                                                                                                                                                                                                                                110
124
123
19
                                                                                                                                                                                  27
14295
                                                                                                      44.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (U-II) (UII).
                                                                                                                                                                                    X
X
                                                                              19;
                                                                              Score 286.5; DB
Pred. No. 7.1e-21
9; Mismatches 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Craniata; Vertebrata; Euteleostomi; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                            KSTSLCFGHFNSYP (IN REF. LDSR -> IHDLLL (IN REF.
                                                                                                                                                                                                                                                           UROTENSIN II.
BY SIMILARITY.
MYKLASCCLLEIGFLUPLL -> METNVFHLMLCVTSARTH
                                                                                                                                                                                    C7A5FC7EFE00D312
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anouar Y., Tostivint H.,
                                                                                                                                DB 1;
                                                                                 41;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    databases
                                                                                                                                                                                         CRC64
                                                                                                                                Length
                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      agonist for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gene
                                                                                                                                                                                                              ۵
.
                                                                                                                                        124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           frog and
                                                                                   ښ
٠٠
                                                                                   Gaps
                                  60
                                                                                   2
```

K

밁 Qy DЪ Š 밁

```
Query Match
Best Local :
                                                                                                                                                Matches
                                                                                                                                                                                                        DISULFID
SEQUENCE
                                                                                                                                                                                                                                       PEPTIDE
                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pierce Chemical Co., Rockford II. (1981).

-!- FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY
SYSTEM. IT HAS A SUGGESTED ROLE IN OSMOREGULATION AND AS A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Munekata E., Ohtaki T., Ichikawa T., McMaster D., (In) Rich D.H., Gross E. (eds.);
Proceedings of the 7th american peptide symposium.
                                                                                                                                                                                                                                                                                    Hormone;
                                                                                                                                                                                                                                                                                                   PROSITE;
                                                                                                                                                                                                                                                                                                           Pfam; PF02083; Urotensin_II;
                                                                                                                                                                                                                                                                                                                                                                            or send
                                                                                                                                                                                                                                                                                                                                                                                                modified and this statement is not removed
                                                                                                                                                                                                                                                                                                                                                                                                                                    the European
                                                                                                                                                                                                                                                                                                                                           EMBL; M14088; AAA49216.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     between
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CYPCA
                                                                                                                                                                                                                                                                                                                                InterPro
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE OF 114-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ohsako S., Ishida I., Ichikawa T
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; El
Actinopterygii; Neopterygii; Teleostei; Ostariophysi;
Cyprinidae; Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-JAN-1988 (Rel. 06,
01-JAN-1988 (Rel. 06,
16-OCT-2001 (Rel. 40,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Cloning and sequence analysis of cDNAs encoding urotensin II-alpha and 'gamma.";
J. Neurosci. 6:2730-2735(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=86307061;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cyprinus carpio (Common carp).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=7962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P06580;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             UR2G_CYPCA
                                                      57
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       II gamma precursor [Contains: Urophysin gamma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          120
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        119
                                                                                     9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 61
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CORTICOTROPIN-RELEASING FACTOR. THE NONHORMONAL PORTION OF THIS PRECURSOR MAY BE A UROTENSIN BINDING PROTEIN, UROPHYSIN. SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 MYKLASCCLLFIGFLNPLLSLPLLDSREISFQLSAPHEDARLTPEELERASLLQILPEML
                                           RQTMGTEAGESPGEAGPSTETP--TPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAA 114
                                                                       CSVLLLS-CSHLLAHPVTDTADMTYSGPDSVEEAGGVNPDDFSVSDLNEHLQRAAV----
                                                                                                      CCLLFIGLLNPLLSLPVTDTGERTLQLPVLEEDA-----LRALEELERMALLQTL 56
                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through a ceen the Swiss Institute of Bioinformatics and the EMBL European Bioinformatics Institute. There are no restrict by non-profit institutions as long as its content is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WKYCI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GAERGDILRKADSSTNIFNPRGNLRKFQDFSGQDPNILLSHLLARIWKPYKKR-ETPDCF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GTEAGESPGEAGPSTETPTPRGSMRK--AFAGQNSNTVLSRLLARTRKQHKQHGAAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MKYCV
                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                               s requires a license agreement (See http://www.isb-sib.ch/announce/
an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                         Cleavage on pair of basic residues; Signal.
                                                                                                                                                                                                                                                                                                   PS00984;
                                                                                                                                                                                                                                                                                                                         IPR001483; Urotensin_II.
                                                                                                                                                                                                   119
125
               -AGYSPLFSQENIKVPGQIPKEALRELLLEKPYRLIPPRGLWGSRRQFRKRGGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         124
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      123
                                                                                                                                              Conservative
                                                                                                                                                                                                         AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                                                                                                                             UROTENSIN_II; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PubMed=2427672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       06, Created)
06, Last sequence update)
40, Last annotation update)
                                                                                                                                                                                                                                   106
125
                                                                                                                                                         17.9%;
27.9%;
                                                                                                                                                                                                      13866 MW;
                                                                                                                                        22; Mismatches
                                                                                                                                                         Score 115;
Pred. No. 0.
                                                                                                                                                                                                                                  UROPHYSIN
                                                                                                                                                                                                 E1587DCFC8CB674D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide symposium, pp.69-72
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Deguchi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          125
                                                                                                                                                                                                                                GAMMA (POTENTIAL)
II-GAMMA.
                                                                                                                                                                                                                                                                                                                                                                                                                          There are no restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Vertebrata; Euteleostomi;
                                                                                                                                                      .00022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ą
                                                                                                                                          47;
                                                                                                                                                                                                                                                                                                                                                                                                Usage
                                                                                                                                                                    Length 125;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Urotensin II-gamma].
                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          precursors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Lederis K.;
                                                                                                                                                                                                                                                                                                                                                                                                Уď
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cypriniformes;
                                                                                                                                                                                                                                                                                                                                                                                                  and
                                                                                                                                                                                                                                                                                                                                                                                                                                           MBL outstation -
                                                                                                                                      24;
                                                                                                                                                                                                                                                                                                                                                                                                for
                                                                                                                                                                                                                                                                                                                                                                                                                                          outstation
                                                                                                                                                                                                                                                                                                                                                                                                                'n
                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                              commercia
                                                                           63
                                                                                                                                                                                                                                                                                                                                                                                                                no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       60
                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                  4.
                                                                                                                                                                            Qy
                                                         밁
                                                                                   δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        밁
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   QУ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         UR2_RANRI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT
                                                                                                                  Matches
                                                                                                                                Best Local
                                                                                                                                              Query Match
                                                                                                                                                                            DISULFID
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                        use by modified
                                                                                                                                                                                                        PEPTIDE
                                                                                                                                                                                                                                       SIGNAL
                                                                                                                                                                                                                                                                                                                          EMBL; AF104117; AAD13069.1;
                                                                                                                                                                                                                                                                                                                                                      or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long modified and this statement is not removed. entities requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                                                       the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Biochem. Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Coulouarn Y., Lihrmann I., Jegou S., Anouar Y., Tostivint Beauvillain J.C., Conlon J.M., Bern H.A., Vaudry H.; "Cloning of the cDNA encoding the urotensin II precursor i human reveals intense expression of the urotensin II gene motoneurons of the spinal cord."; proc. Natl. Acad. Sci. U.S.A. 95:15803-15808(1998).
                                                                                                                                                                                                                          PROPEP
                                                                                                                                                                                                                                                      Hormone;
                                                                                                                                                                                                                                                                             Pfam; PF02083; Urotensin_II;
                                                                                                                                                                                                                                                                                                              PIR; PQ0445; PQ0445.
                                                                                                                                                                                                                                                                                                                                                                                                                                    between
                                                                                                                                                                                                                                                                                                                                                                                                                                                      This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P33715; Q9PSX6;
01-FEB-1994 (Rel. 28, Created)
16-OCT-2001 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    .. 117 ADCFWKYCI 125
                                                                                                                                                                                                                                                                                           InterPro; IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Rana ridibunda (Laughing frog) (Marsh frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Isolation and primary structure of tetrapod, the frog Rana ridibunda.", Biochem. Biophys. Res. Commun. 188:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conlon J.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=93075134; PubMed=1445302;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       rissue=Brai
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE OF 115-127.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE=99080095; PubMed=9861051;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Brain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=8406;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Amphibia; Batrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    UTS2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Urotensin II precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            UR2_RANR1
                          59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   115
                                                                        1 MDRVPFCCLLFIGLLNPLLSLPVTDTGERTLQL--PVLEEDALRALEELERMALLQTLRQ
TMGTEAGESPGEAGPSTE----TPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQH-GA 113
                                                                                                                                                                                                                                                                                                                                                                                                                ween the Swiss Institute of Bioinformatics European Bioinformatics Institute. There a
                                            MSKLFFCCLILAGSFCSFRSLPIIVPSKGSLRLSESALDFGDLKSWDDETR--LLRNLPM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE SPECIFICITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOBILIZING ACTIVITIES. IT HAS A SUGGESTED ROLE
                                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through a collaboration -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORTICOTROPIN-RELEASING FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PECFWKYCI 123
                                                                                                                 l Similarity
40; Conserv
                                                                                                                                                                                                    Cleavage on pair of 16 16 17 111 111 115 115 117
                                                                                                                                                                                                                                                                    PS00984;
                                                                                                                                                                          127 AA;
                                                                                                               Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   O'Harte F.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        INVOLVED IN SMOOTH MUSCLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                               UROTENSIN_II; 1.
                                                                                                                                                                                      126
                                                                                                                                                                         14732 MW;
                                                                                                                                                                                                                                                                                                                                                                   license agreement (See http://www.isb-sib
                                                                                                                                        17.68;
                                                                                                                             30.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Anura;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (U-II)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CENTRAL NERVOUS SYSTEM.
                                                                                                                                                                                                                                  of basic residues; Signal. POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Smith D.D.,
                                                                                                              21;
                                                                                                          Pred. No. 0.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Neobatrachia; Ranoidea; Ranidae; Rana
                                                                                                                                        Score 113;
                                                                                                                                                                                                    UROTENSIN
                                                                                                                                                                       FC26BC90E00C082E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (UII)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      188:578-583(1992)
                                                                                                            No. 0.00035;
smatches 59;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    urotensin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Tonon
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        127
                                                                                                                                                                                                    Ι
                                                                                                                                                                                                                                                                                                                                                                                             There are no restrictions ng as its content is in
                                                                                                                                          DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      À
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  M.-C., Vaud
sin II from
                                                                                                                                                                                                                                                                                                                                                                                  Usage
                                                                                                                                      Length 127;
                                                                                                                                                                       CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        precursor in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SPINAL CORD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tostivint H.,
                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vaudry H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AS
                                                                                                                                                                                                                                                                                                                                                                                  bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ×
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       NOI
                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL outstation
```

brain

of

frog

and

for

commercia]

no 9

way

.ch/announce/

UR26_O

QУ 밁 Qy

10;

Gaps

5

58 58

밁

64

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Db
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 6
UR2A_CYPCA
                             8
                                                               рь
                                                                                             οy
                                                                                                                                               Query Match
Best Local
                                                                                                                                Matches
                                                                                                                                                                                       HOTTENER, PS00984; UROTENSIN_II; 1.
HOTTENER, Cleavage on pair of basic reSIGNAL 1 21
CHAIN 22 106
PEPTIDE 114 125
DISULFID 119 124
SEQUENCE 125 A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       UR2A_CYPCA
P04560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ohsako S., Ishida I., Ichikawa T., Deguc "Cloning and sequence analysis of cDNAs urotensin II-alpha and 'gamma.";
J. Ncurosci. 6:2730-2735(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      UII alpha precursor (Contains: Urophysin alpha; Urotensin II-alpha).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-AUG-1987 (Rel. 05, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Ostariophysi; Cypriniform
                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (In) Rich D.H., Gross E. (eds.);
Proceedings of the 7th american peptide symposium, pp.69-72,
Pierce Chemical Co., Rockford II. (1981).
PIERCE TO UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY
-I- FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cyprinus carpio (Common carp)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Munekata E.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 114-125
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=86307061; PubMed=2427672;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=7962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      114
                                                                                                                                                                                                                                                                                                                                             EMBL; M14084; AAA49215.1; -
                                                                                                                                                                                                                                                                                                                                                                                          entities
                                                                                                                                                                                                                                                                                                                            InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     59
 79
                                 69
                                                                19
                                                                                                18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SYSTEM. IT HAS A SUGGESTED ROLE IN OSMOREGULATION AND AS A CORTICOTROPIN-RELEASING FACTOR. THE NONHORMONAL PORTION OF THIS PRECURSOR MAY BE A UROTENSIN BINDING PROTEIN, UROPHYSIN. SIMILARITY: BELONGS TO THE UROTENSIN 2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LSECFWKYCV 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APECFWKYCI 123
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FVDKEA-ERDAEDIFSKEGFGLDAYNMDDKEELFDKHPRISLLSRLQSKDRKQFKKRAGN 117
                            GEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCI 123
                                                                                              LLSLPVTDTGERTLQLPVLEED------ALRALEELERMALLQTLRQTMGTEAGESP 68
GQ-----IPKEALRELLLEKPYRLIPPSGLWGSRRQFRKRGGGADCFWKYCV 125
                                                                  LVAHPVTDTADMTYSGPDSVEEAGGVSPDDFAVSDLNDLLQRAAVVEYSPLLSRENIKVP
                                                                                                                                                                                                                                                                                                                                                            y non-profit institute. There are no restrictions on its addeduced institutions as long as its content is in no way ad and this statement is not removed. Usage by and for commercial is requires a license agreement (See http://www.lsb-sib.ch/announce/lan cmail to license@isb-sib.ch)
                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                               IPR001483; Urotensin_II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Cyprinus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Ohtaki T.,
                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                15.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ichikawa T., McMaster D.,
                                                                                                                                 23;
                                                                                                                                                Score 101.5; DB 1; Length 125; Pred. No. 0.0044;
                                                                                                                                                                                                                                UROTENSIN II-ALPHA.
                                                                                                                                                                                                                                                 UROPHYSIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                 1FB6F86CA6B3A5AF CRC64;
                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                  residues; Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Deguchi T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              125
                                                                                                                                                                                                                                                 ALPHA (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             encoding precursors
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AA
                                                                                                                                     47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Lederis
                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cypriniformes
                                                                                                                                     17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of.
                                                                                                                                      Gaps
                                                                       78
                                                                                                                                      2
```

E2BD_HUMAN RESULT 7

δÃ

42

RALEELERMALLQTLRQTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLL 101

2

```
Query Match
Best Local Similarity
Matches 26; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hu R.-M., Han Z.-G., Song H.-D., Peng Y.-D., Huang Q.-H., Ren S.-X., Gu Y.-J., Huang C.-H., Li Y.-B., Jiang C.-L., Fu G., Zhang Q.-H., Gu B.-W., Dai M., Mao Y.-F., Gao G.-F., Rong R., Ye M., Zhou J., Xu S.-H., Gu J., Shi J.-X., Jin W.-R., Zhang C.-K., Wu T.-M., Huang G.-Y., Chen Z., Chen M.-D., Chen J.-L.; "Gene expression profiling in the human hypothalamus-pituitary-adrenal axis and full-length cDNA cloning."; proc. Natl. Acad. Sci. U.S.A. 97:9543-9548(2000).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     E2BD_HUMAN STANDARD; PRT; 523 AA.

Q9UI10; Q9UI95; Q9UBG4; Q9UIQ9;
16-OCT-2001 (Rel. 40, Created)
16-CCT-2001 (Rel. 40, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
Translation initiation factor eIF-2B delta subunit (eIF-2B GDP-GTP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "cDNA cloning, genomic organization and chromosomal localization the human eIF2B delta subunit."; submitted (SEP-1998) to the EMBL/GenBank/DDBJ databases.
                                                             CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=20402571; PubMed=10931946;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE-Adrenal gland;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. (ISOFORM 1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria; Primates; Catarrhini; Hominidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EIF2B4 OR EIF2BD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           exchange factor).
                                                                                                                                                                                                                                                                                                                 EMBL; AF112207; AAF17195.1; -. EMBL; AJ011305; CAB57260.1; -. EMBL; AJ011306; CAB57261.1; -.
                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (Sce http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- FUNCTION: CATALYZES THE EXCHANGE OF EUKARYOTIC INITIATION FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Wightman P.J., Bonthron D.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A. (ISOFORMS 1 AND
                                                                                                                                                                                                                        MIM;
                                                                                                                                                                                                                                                   EMBL; AJ011306; CAB57261.1;
EMBL; AJ011307; CAB57304.1;
EMBL; AJ011308; CAB57305.1;
EMBL; AJ011308; CAB57305.1;
                                                                                                             CONFLICT
                                                                                                                            CONFLICT
                                                                                                                                                          VARSPLIC
                                                                                                                                                                                         InterPro; IPR000649; 1F-
Pfam; PF01008; IF-2B; 1.
                                                                                                                                                                                                                                          Genew;
                                                                                                                                                                            [nitiation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SUBUNIT: COMPLEX C
DELTA AND EPSILON.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         produced by alternative splicing.
SIMILARITY: BELONGS TO THE EIF-2B ALPHA/BETA/DELTA SUBUNITS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ALTERNATIVE PRODUCTS: 2 isoforms; 1 (shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2-BOUND GDP FOR GTP.
SUBUNIT: COMPLEX OF FIVE DIFFERENT SUBUNITS; ALPHA, BETA, GAMMA,
                                                                                                                                                                                                                         606687;
                                                                                                                                                                                                                                          HGNC: 3260;
                                                                                                                                                                                                         IPR000649; IF-2B.
                                                              481
523 AA;
                                                                                                                                                                            factor;
                                                                                             71
197
323
 Conservative.
                                                                                                                                                                                                                                          EIF2B4
                                                              71 M
197 S
323 S
481 L
57599 MW;
                                                                                                                                                                            Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chordata; Craniata; Vertebrata; Euteleostomi;
                 12.7%;
32.1%;
   10;
                                                                                                                                                            biosynthesis; Alternative splicing.
MAAVAVAVRE -> MPTQQPAAPSTRAPKPSRSLSGSLCAL
                                                                           FSDA (IN ISOFORM 2).
MISSING (IN REF. 2).
S -> T (IN REF. 2).
S -> A (IN REF. 2).
L -> S (IN REF. 2).
                                                                                                                                                                                                                                                                                        JOINED
                 Score
Pred.
                                                                  F615E4FD816B9E48 CRC64;
    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2
).
                 81.5;
No. 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         A
                                   DB
    36;
                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            here) and
                                   Length 523;
      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              <u>ب</u>
        9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of
```

ą ,

В δÕ В

```
RESULT 9
VE1_BPV1
ID VE1_
P031
AC P031
DT 21-J
DT 21-J
DT 15-J
DE Rep1
GN E1.
                                                                                                                                                                                                                                   Query Match
Best Local
                                                                                                                                                                                              Matches
                          P03116; Q9WMH1;
21-JUL-1986 (Rel
21-JUL-1986 (Rel
15-JUL-1998 (Rel
                                                                 VE1_BPV1
                  Replication
                                                                                                                                                                                                                          Pfam: PF01008; IF-2B; 1.
Initiation factor: Protein biosynthesis.
SEQUENCE 523 AA: 57120 MW; 05789581E9D25558 CRC64;
                                                                                                                                                                                                                                                                    EMBL; X75451; CAA53204.1; ALT_INIT
                                                                                                                                                                                                                                                                                       entities requires a license agreement (for send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                         modified and this statement is not removed.
                                                                                                                                                                                                                                                            InterPro; IPR000649; IF-2B.
                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the EW
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     P41111;
01-FEB-1995
01-NOV-1997
                                                                                                                                                                                                                                                                                                                              the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Oryctolagus cuniculus (Rabbit).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Lagomorpha; Leporidae; Oryctolagus.
                                                                                                                                                                                                                                                                                                                                                                                                                 BIOCHIM. Biophys. Acta 1217:207-210(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                          Price N.T., Francia G., Hall L., Proud C.G.;
"Guanine nucleotide exchange factor for eukaryotic initiation factor-2. Cloning of cDNA for the delta-subunit of rabbit translation initiation factor-2B.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=New Zealand white; TISSUE=Liver; MEDLINE=94153999; PubMed=8110836;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RABIT
                                                                                                                   159
                                                                                                                                101 LARTRKQ----HKQHGAAPECF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EIF2B4 OR EIF2BD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          exchange factor)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Translation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                E2BD_RABIT
                                                                                                                                                        104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=9986;
                                                                                                                                                                          42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-JUL-1999
                                                                                                                                                                                                       Loca1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      æ
                                                                                                                                                                                                                                                                                                                                                                                                2-BOUND GDP FOR GTP.
SUBUNIT: COMPLEX OF FIVE DIFFERENT SUBUNITS;
                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY: BELONGS TO THE EIF-2B ALPHA/BETA/DELTA SUBUNITS
                                                                                                                                                                 RALEELERMALLOTLROTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQ-NSNTVLSRL 100
                                                                                                               VRKSERQQVPTRKDYGSKVSLF
                                                                                                                                                                                                                                                                                                                                                                                            DELTA AND EPSILON
                                                                                                                                               RAKQEAER-----ALKQARKGEQGGPPPQASPSTAGEAPAGGKRLTEHTQADDPTLLRRL 158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                KKPERQQVPTRKDYGSKVSLF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ARTRKQ----HKQHGAAPECF 118
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RAKQEAER-----ALKQARKGEQGGPPPKASPSTAGETPSGVKRLPEYPQVDDLLLRRLV 159
                                                                                                                                                                                             Similarity
26; Conserv
                                                                                                                                                                                                                                                                                                                  non-profit institutions as long as its content
                        (Rel. 01, Last (Rel. 36, Last
                                             (Rel. 01, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Rel. 31, Createa)
  (Rel. 35, Last sequence update)
  (Rel. 38, Last annotation update)
  initiation factor eIF-2B delta subunit (eIF-2B GDP-GTP)
                 protein E1.
                                                                                                                                                                                           Conservative
                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                    12.3%;
                        Last annotation
                                                                                                                                                                                            11;
                                  sequence
                                                                                                               180
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 180
                                                                                                                                                                                        Score 79; DB 1;
Pred. No. 3.5;
1; Mismatches 3
                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                              605
                                                                                                                                                                                                                                                                                             (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               523
                                                                                                                                                                                                                                                                                                                           There are no re
                                                              AΑ
                                                                                                                                                                                          35;
                                                                                                                                                                                                                                                                                                         Usage
                                                                                                                                                                                                          Length 523
                                                                                                                                                                                                                                                                                                                                                                                                ALPHA, BETA,
                                                                                                                                                                                         Inde1s
                                                                                                                                                                                                                                                                                                           γď
                                                                                                                                                                                                                                                                                                                  restrictions on
tent is in no
                                                                                                                                                                                                                                                                                                           and for
                                                                                                                                                                                                                                                                                                                                    EMBL outstation
                                                                                                                                                                                       10;
                                                                                                                                                                                                                                                                                                                                                 ω
                                                                                                                                                                                                                                                                                                                                              collaboration
                                                                                                                                                                                                                                                                                                                                                                                                 GAMMA,
                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                        commercial
                                                                                                                                                                                                                                                                                                                 way
                                                                                                                                                                                      ω
AC DT DT DT DT OS
                                                                                                                                                                                                                                   HYFR_ECOLI
                                                                                                                  DЬ
                                                                                                                                    δõ
                                                                                                                                                       В
                                                                                                                                                                      žQ.
                                                                                     RESULT
                                                                                                                                                                                                       Query Match
Best Local :
                                                                                                                                                                                             Matches
     Hydrogenase-4 transcriptional activator. HYFR OR B2491
                                                                                                                 116
                                                                                     10
                                                                                                                                    88
                                                                                                                                                       59
                                                                                                                                                                          S
                                                                                                                                                                                                   Loca1
```

δõ DЬ οy

B

update)

```
PRECULA
HYPER ECOLI
197129; P76567; P76976; P705...
1 01-NOV-1997 (Rel. 35, Created)
1 01-NOV-1997 (Rel. 35, Last sequence upda
16-OCT-2001 (Rel. 40, Last annotation up
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Nuclear protein.
NP_BIND 433
SEQUENCE 605 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBI outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PIOC. Natl. Acad. Sci. U.S.A. 90:5086-5090(1993).

-i- FUNCTION: ATP-DEPENDENT DNA HELICASE REQUIRED FOR INITIATION OF VIRAL DNA REPLICATION. IT FORMS A COMPLEX WITH THE VIRAL E2 PROTEIN. THE E1-E2 COMPLEX BINDS TO THE REPLICATION ORIGIN WHICH CONTAINS BINDING SITES FOR BOTH PROTEINS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Early protein; DNA replication; Helicase; ATP-binding; DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF00519; E1; 1
Pfam; PF00524; E1_N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TRANSFAC; T00203; -.
InterPro; IPR001177; Papillom_E1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X02346; CAB46511.1; -. PIR; A03663; WIWLEB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=93281701; PubMed=8389467;
Yang L., Mohr I., Fouts E., Lim D.A., Nohaile M
"The El protein of bovine papilloma virus 1 is
helicase.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHARACTERIZATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           encoded by the E1 and E2 EMBO J. 10:449-457(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Papillomavirus type 1 genome.
Nature 299:529-534(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=83012974; PubMed=6289124; Chen E.Y., Howley P.M., Levinson A.D., Seeburg P.H.; "The primary structure and genetic organization of the bovine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Transient replication of BPV-1 requires two viral polypeptides encoded by the E1 and E2 open reading frames.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REQUIREMENT FOR REPLICATION. MEDLINE=91122053; PubMed=1846806;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE=83012974;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NCBI_TaxID=10559;
[1]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bovine papillomavirus type 1. Viruses; dsDNA viruses, no RN Papillomavirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ustav M., Stenlung
                                                                                                                                                                                                                                                                   FAENEANRVLTPLQVQGEGEGRQ 138
                                                                                                                                                                                                                                                                                                                                                                                               VLEEDALRALEELERMA----LLQTLRQTMGTEAGESPGEAGPSTETPTPR----GSMRKA 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SUBCELLULAR LOCATION: Nuclear.
                                                                                                                                                                                                                                                                                                               FAGONSNTVLSRLLARTRKOHKO 110
                                                                                                                                                                                                                                                                                                                                                     VFQGNHLEVFQALEKKAGEEQILNLKRKVLGSSQNSSGSEA---SETPVKRRKSGAKRRL 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               440 A
; 68190 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           11.9%;
28.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 76; DB Pred. No. 8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RNA stage; Papillomaviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATP (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             C8400B7B8F606E0B CRC64;
                                                                                update
                                                                                                                                                      670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      ω
3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     s an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 605
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Botchan M.;
ATP-dependent
                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                               ω
```

```
Query Match
                                                                                                                                                   pfam; pF00158; Sigma54_activat; 1.
pfam; pF00159; GAF; 1.
pfam; pF01590; GAF; 1.
pfam; pF02954; HTH_8; 1.
SMART; SM00305; GAF; 1.
SMART; SM00005; GAF; 1.
TIGRFAMS; TIGR01199; HTH_fis; 1.
TIGRFAMS; TIGR01199; HTH_fis; 1.
PR0SITE; pS00675; SIGMA54_INTERACT_1; 1.
PR0SITE; pS00676; SIGMA54_INTERACT_2; 1.
PR0SITE; pS00688; SIGMA54_INTERACT_3; 1.
PR0SITE; pS00688; SIGMA54_INTERACT_4; 1.
PR0SITE; pS00688; SIGMA54_INTERACT_4; 1.
PR0SITE; pS00688; SIGMA54_INTERACT_4; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Blattner F.R., Plunkett G. III, Bloch C.A., Perna N.T., Burland V Riley M., Collado-Vides J., Giasner J.D., Rode C.K., Mayhew G.F., Gregor J., Davis N.W., Kirkpatrick H.A., Goeden M.A., Rose D.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Construction of a contiguous 874-kb sequence of the Escherichia coli-
K12 genome corresponding to 50.0-68.8 min on the linkage map and
analysis of its sequence features.";
DNA Res. 4:91-113(1997).
-I- FUNCTION: REQUIRED FOR INDUCTION OF EXPRESSION OF THE HYDROGENASE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Andrews S.C., McClay J., Ambler A., Quail M., Berks B.C., Submitted (QCT-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Bacteria; Proteobacteria; gamma subdivision; Enterobacteriaceae; Escherichia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This SWISS-PROT entry is copyright. It is produced through a coliaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as iong as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Yamamoto Y., Aiba H., Baba T., Hayashi K., Inada T., Isono K., Itoh T., Kimura S., Kitagawa M., Makino K., Miki T., Mitsuhashi N., Mizobuchi K., Mori H., Nakade S., Nakamura Y., Nashimoto H., Oshima T., Oyama S., Saito N., Sampei G., Satoh Y., Sivasundaram S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=97426617; PubMed=9278503;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-K12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=562;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAINER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "The complete genome sequence of Escherichia coli K-12."; science 277:1453\cdot1474(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mau B., Shao Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Tagami H., Takahashi H., Takeda J., Takemoto K., Uehara K., Wada
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=97349980;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                   NP_BIND
                                                                                                                                                                                                                                                                                                                                Interpro; IPR002078;
                                                                                                                                                                                                                                                                                                                                                InterPro; IPR003018; GAF.
InterPro; IPR002197; HTH_Fis.
                                                                                                                                                                                                                                                                                                                                                                                     Interpro; IPR003593;
                                                                                                                                                                                                                                                                                                                                                                                                    EcoGene; EG14219; hyfr.
                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL;
                                 SEQUENCE
                                                                                                                       Complete
                                                                                                                                       Transcription regulation;
                                                                                    NP_BIND
                                                                                                         DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: THE CENTRAL REGION CONTAINS A SIGMA-54 FACTOR INTERACTION ATP-BINDING DOMAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                      D90877; BAA16379.1; -. D90878; BAA16380.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       M63654; AAB88573.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                       AE000335; AAC75544.1; ALT_INIT.
                                                                                                                       proteome
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   / MG1655;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PubMed=9205837;
                                                                      576
382
447
                                                                                                                                                                                                                                                                                                                                                                                   AAA_ATPase
                                    75305 MW;
                                                                                                                                                                                                                                                                                                                                   Sig54_interact.
     11.8%;
                                                                                                                                            Activator; DNA-binding; ATP-binding;
                                                      ATP (POTENTIAL).
ATP (POTENTIAL).
H-T-H MOTIF (BY SIMILARITY).
                                                                                                         SIGMA-54 FACTOR INTERACTION (POTENTIAL)
       Score
                                        0EA738D2D6BA96B6 CRC64;
       75.5;
       DB
       1;
     Length 670
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Guest J.R.;
```

î

```
NUPLYEAST
ID NUPLY
PASS
AC P20676
DT 01-FEB
DT 01-FEB
DT 15-JUN
DE NUPL
OC GN NUPL
CO Saccha
OC Saccha
OC Saccha
OC Saccha
OC Saccha
OC NUBLI
RN HEDLIN
RN MEDLIN
RY MEDLIN
RY FORG
CC -i- ST
CC -i-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         밁
                       Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity Matches 26; Conserv
                                                                          Query Match
Best Local S
Matches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUP1_YEAST
P20676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-FEB-1991 (Rei. 17, Last sequence update)
15-JUN-2002 (Rei. 41, Last annotation update)
Nucleoporin NUP1 (Nuclear pore protein NUP1).
NUP1 OR YOR098C OR YOR3182C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-FEB-1991
01-FEB-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Voss H., Benes V., Andrade M.A., Valencia A., Rechmann S., Te
Schwager C., Paces V., Sander C., Ansorge W.;
"DNA sequencing and analysis of 130 kb from yeast chromosome
Yeast 13:655-672(1997).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           pore complex.";
Cell 61:965-978(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Davis L.I., Fink G.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=90275616; PubMed=2190694;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Saccharomyces cerevisiae (Baker's yeast).
Eukaryota; Fungi; Ascomycota; Saccharomycotina; Saccharomycetes;
                                                                                                                                                                                                                                                                          EMBL; M33632; AAA34822.1; -.
EMBL; X94335; CAA64020.1; -.
EMBL; Z75006; CAA99295.1; -.
PIR; A35622; A35622.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=97344368; PubMed=9200815;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "The NUP1 gene encodes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=4932;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Saccharomycetales; Saccharomycetaceae; Saccharomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          595
                                                                                                                                                                                                                                                                                                                                                                                                        entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to licensc@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -i- SUBCELLULAR LOCATION: Nuclear pore complex.
-i- DOMAIN: APPEARS TO BE DIVIDED INTO THREE DOMAINS DEFINED CENTRALLY LOCATED REPEATING UNITS. FUNCTIONAL N-TERMINAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -i- FUNCTION: ESSENTIAL COMPONENT OF NUCLEAR PORE COMPLEX.
NUCLEOPORINS MAY BE INVOLVED IN BOTH BINDING AND TRANSLOCATION
THE PROTEINS DURING NUCLECCYTOPLASMIC TRANSPORT.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         641
                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                          Nuciear protein; Transport; Repeat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33 LPVLEED-ALRAL-----
                                                                            Local Similarity 23.7
les 28; Conservative
OR OF NUP2 IS REQUIRED FOR GROWTH.

DOMAIN: CONTAINS F-X-F-G REPEATS.

SIMILARITY: TO THE CENTRAL REPEATING UNITS

TO MAMMALIAN P62.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRGAATR - - LGMKRTTLLSRM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRGSMRKAFAGQNSNTVLSRL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LPTLNEDSALRSSMAQLLHPTTPENDEEERQRIVQVLRETNGIVAG---
                                                                                                                                                                                                                                                           S0005624; NUP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Rel. 17, Created)
                                                                                                                                                                                 1076 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32.1%;
                                                                                                         11.5%;
23.7%;
                                                                                                                                                                                   113581 MW; 4AC23567D2FB53CC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 essential component of the yeast nuclear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              659
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              9;
                                                                                  18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 10;
                                                                                                      Score 73.5;
Pred. No. 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -EELERMALLQTLRQTMGTEAGESPGEAGPSTETPT 79
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                               29 X 9 AA APPROXIMATE REPEATS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1076
                                                                                                              28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA
                                                                                                                                        DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Usage
                                                                                    49;
                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OF NSP1 AND NUP2,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indeis
                                                                                                                                        Length 1076;
                                                                                       Indeis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      bу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Teodoru C.,
                                                                                       23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PY
YB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        χV. ";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUP1
                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4.
                                                                                            4.
```

```
RESULT 13
VE1_BPV2
ID VE1_B
AC P1129
DT 01-JU
DT 01-JU
DT 15-JU
                                                                                                                               DЪ
                                                                                                                                                        γQ
                                                                                                                                                                                   DЪ
                                                                                                                                                                                                              δÃ
                                                                                                                                                                                                                                                                                               ACCO_ACTCH
ID ACCO_/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  δÃ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              В
                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                       Query Match
Best Local :
  VE1_BPV2
P11298;
O1-JUL-1989
O1-JUL-1989
15-JUL-1998
                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through between the Swiss Institute of Bioinformatics and the Ewisse European Bioinformatics Institute. There are no restruse by non-profit institutions as long as its content use by non-profit institutions as long as its content modified and this statement is not removed. Usage by and
                                                                                                                                                                                                                                                                                                                    Fruit ripening; Ethylene biosynthesis; Oxidoreductase;
                                                                                                                                                                                                                                                                                                                                   InterPro; IPR005123; 20G-FeII_0
Pfam; PF03171; 20G-FeII_0xy; 1.
                                                                                                                                                                                                                                                                                                                                                              EMBL; M97961; AAA18566.1; -
                                                                                                                                                                                                                                                                                                                                                                                         entities requires a license agreement (S or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plant Physiol. 101:691-692(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eukaryota; Viridiplantae; Streptophyta; Embryophyta; Tracheophyta; Spermatophyta; Magnoliophyta; eudicotyledons; core eudicots; Asteridae; Ericales; Actinidiaceae; Actinidia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUL-1993 (Rel. 26,
01-JUL-1993 (Rel. 26,
15-JUN-2002 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- PATHWAY: Ethylene biosynthesis; last step.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ETHYLENE + HCN + CO(2) + 2 H(2)O.
-!- COFACTOR: IRON AND ASCORBATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  carboxylic acid oxidase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "A cDNA sequence from kiwifruit homologous to 1-aminocyclopropane-l-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Macdiarmid C.W.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=94105308; PubMed=8278512;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN=cv. Deliciosa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM
                                                                                                                               148
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=3625;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Actinidia chinensis (Kiwi) (Yangtao)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ACCO_ACTCH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-JUL-1993 (Rel. 26, Last sequence update)
15-JUN-2002 (Rel. 41, Last annotation update)
1-aminocyclopropane-1-carboxylate oxidase (EC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ethylene-forming enzyme) (EFE).
                                                                                                                                                          69
                                                                                                                                                                                   92
                                                                                                                                                                                                              18
                                                                                                                                                                                                                                         Local Similarity
nes 28; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          152
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             92
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DEVELOPMENTAĹ STAGE: EXPRESSED DURING FRUIT RIPENING.
SIMILARITY: BELONGS TO THE IRON/ASCORBATE-DEPENDENT FAMILY
                                                                                                                                                                                                      LLSLPVTDTGERTLQLPVLEEDALRAL----EELERMA--LLQTLRQTMGTEAGESP---
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OXIDOREDUCTASES.
                                                                                                                           YGSKGPTFGTKVSNYPPCPRPELIK 172
                                                                                                                                                    -GEAGPSTET-----PTPRGSMRK 86
                                                                                                                                                                                  LRHLPVSNISE--
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SYLCTSSTPSPIKNGSCTRQLAGKSGEDTNVGLPILKSLKNRSNRK-RFHSQSKGTVW 208
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TENTERPPLLPILPIQRLRLLREKQRVRNMRELGLIQSTEFPSITSSVILGSQSKSDEGG 151
                                                                                                                                                                                                                                                                                                           Ç
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         --PSTETPTPRGSMRKAFAGQNSN-----TVLSRLLARTRKQHKQHGAAPECFW
                                                                                                                                                                                                                                                                                               Multigene
319 AA;
  (Rel. 11,
(Rel. 11,
(Rel. 36,
                                                                                                                                                                                                                                         Conservative
                                                        STANDARD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gardner R.C.;
                                                                                                                                                                             IPDLEQDHRKAMKEFAEKLEKLAEQLLDLLCENVGLEKGYLKKAF 147
                                                                                                                                                                                                                                                   11.4%;
                                                                                                                                                                                                                                                                                                         family
                                                                                                                                                                                                                                                                                                                                               20G-FeII_Oxy.
  Last
Last
                             Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Created)
                                                                                                                                                                                                                                                                                         MW; 818FC9551FD98524 CRC64;
sequence update) annotation updat
                                                                                                                                                                                                                                       13;
                                                                                                                                                                                                                                                   Score 73;
Pred. No.
                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRT;
                                                                                                                                                                                                                                     Mismatches
                                                        604
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                319
                                                                                                                                                                                                                                                                                                                                                                                                    (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                           There are no restrictions ng as its content is in
                                                       AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A
                                                                                                                                                                                                                                      24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1. -. -. -) (ACC
                                                                                                                                                                                                                                                              Length
                                                                                                                                                                                                                                     Inde1s
                                                                                                                                                                                                                                                                                                                                                                                                                    and
                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                            is
for
                                                                                                                                                                                                                                   20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           oxidase)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OF
                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .119
                                                                                                                                                                                                        68
                                                                                                                                                                                                                                                                                                                                                                                                                               Ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            g
                                                                                                                                                                                                                                                                                                                                                                                                                              way
                                                                                                                                                                                                                                  G
```

```
ACCOMPAND ACCOMP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Db .
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Qy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ş
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                               Baer R., Bankier A.T., Biggin M.D., Gibson T.J., Hatfull G., Hudson G.S. Tuffnell P.S., Barrell B.G., "DNA sequence and expression of the Nature Parking Procession P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-1986
21-JUL-1986
01-DEC-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EAD_EBV P03191;
                                       MEDLINE=87284177; PubMed=2441081; Pfitzner A.J., Strominger J.L., S
                                                                                                                                                                                                                                                                                                                                                                                                                             Viruses; dsDNA viruses,
Gammaherpesvirinae; Lymp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NP_BIND SEQUENCE
                                                                                                SEQUENCE OF 123-404 FROM N.A
                                                                                                                                                             Nature
                                                                                                                                                                                                                                                                                                     MEDLINE=84270667; PubMed=6087149;
                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Epstein-barr virus (strain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BMRF1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Early antigen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nuclear protein. NP_BIND 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Pfam; PF00519; E1; I
Pfam; PF00524; E1_N;
Early protein; DNA r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               use by non-profit institutions as long modified and this statement is not removed entities requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Groff D.E., Mitra R., Lancaster W.D.;
Submitted (MAY-1988) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: ATP-DEPENDENT DNA HELICASE REQUIRED FOR INITIATION OF
VIRAL DNA REPLICATION. IT FORMS A COMPLEX WITH THE VIRAL E2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; M20219; AAA66833.1; -. PIR; C31169; W1WLB2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       or send an email to license@isb-sib.ch)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Replication E1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Viruses;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               116 FSENEANRVLTPL 128
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=10560;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bovine papillomavirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            88
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROTEIN. THE E1-E2 COMPLEX BINDS TO THE REDLICATION CONTAINS BINDING SITES FOR BOTH PROTEINS.
SUBCELLULAR LOCATION: Nuclear.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            VLEEDALRALEELERMA----LLQTLRQTMGTEAGESPGEAGPSTETPTPR---GSMRKA 87
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FAGQNSNTVLSRL 100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         VFQGNHLEVFQALEKKAGEEQLLNLKRKVLGSSENSSGSEA---SETPAKRQKAGAKRRL 115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through
een the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                          equence and expression of the 310:207-211(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        l Similarity
23; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR001177; Papillom_E1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             dsDNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           604 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                protein
Strominger J.L., Sp ion of a cDNA clone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             viruses,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      439
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                replication; Helicase; ATP-binding; DNA-binding;
                                                                                                                                                                                                                                                                                                                                                                                                                       (strain B95-8) (Human herpesvirus ses, no RNA stage; Herpesviridae; Lymphocryptovirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        68077 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Last sequence update)
Last annotation updat
D (EA-D).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          type
s, no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2.
RNA stage; Papillomaviridae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 73;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATP (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  D2D7036ADE88A9DD CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
                                       Speck S.H.;
      corresponding
                                                                                                                                                                                                                                              .
S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             No.
                                                                                                                                                                                                                                           Deininger P.
                                                                                                                                                                                  B95-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       There
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dв
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Ą
                                                                                                                                                                            Epstein-Barr virus genome.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Usage
                                                                                                                                                                                                                                     S.C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 604;
   to a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Inde1s
                                                                                                                                                                                                                                                                      Farrell P.J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ьy
   transcript from
                                                                                                                                                                                                                                        Seguin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 restrictions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORIGIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
                                                                                                                                                                                                                                        c.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         . Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WHICH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       commercia:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 g
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 its
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ω
```

```
Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                В
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    В
 DRCCCCCFTAXC
                                                                                                                                                                                                                                                                                                                                                                                                                                                    UR2_PLAFE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local S
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                 UR2_PLAFE P21857;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 the Epstein-Barr virus BamHI M fragment: evidence for overlapping mrNAs.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "A second Epstein-Barr virus early antigen gene in BamHI fragment encodes a 48- to 50-kilodalton nuclear protein.";
J. Virol. 56:860-866(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=86062917; PubMed=2999442; Cho M.-S., Mllman G., Hayward S.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              J. Virol. 61:2943-2946(1987).
                                                                                                                                                                                                                                                                                                     01-MAY-1991 (Rel. 18, Created)
01-MAY-1991 (Rel. 18, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Urotensin II precursor (U-II) (UII) (Fragments).
Platichthys flesus (European flounder).
Eukaryota; Metazoa; Chordata; Cranlata; Puttebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; V01555; CAA24844.1; -. EMBL; M17322; AAA45877.1; -. PIR; A03754; QQBE13. PIR; S32998; S32998.
PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Early protein; Transcription regulation; Activator; DNA-binding; Nuclear protein; Antiqen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation.
                                Conlon J.M., Arnold-Reed D.E., Balment R.J.;
"Post-translational processing of prepro-urotensin II.";
"FEBS Lett. 266:37-40(1990).
-i- FUNCTION: UROTENSIN IS FOUND IN THE TELEOST CAUDAL NEUROSECRETORY
SYSTEM, IT HAS A SUGGESTED ROLE IN OSMOREGULATION AND AS A
CORTICOTROPIN-RELEASING FACTOR. THE NONHORMONAL PORTION OF THIS
PRECURSOR MAY BE A UROTENSIN BINDING PROTEIN, UROPHYSIN.
                                                                                                                                                                                                                                                    Actinopterygli; Neopterygli; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygli; Percomorpha; Pleuronectiformes; Pleuronectoldei; Pleuronectldae; Platichthys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -1- SUBCELLULAR LOCATION: Nuclear.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      - 1- FUNCTION: TRANS-ACTIVATOR FOR LYTIC CYCLE.
                                                                                                                                                   TISSUE=Urophysls;
MEDLINE=90306357; PubMed=2365069;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DENTIFICATION OF PROTEIN
                                                                                                                                                                                               SEQUENCE.
                                                                                                                                                                                                                                  NCBI_TaxID=8260;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           378 ARKRTSSEARQKQKHPK 394
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             103
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                318
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     258 PAVSVPILRFYRSGIIAVVAGLLTSAGDLPLDLSVILFNHASEEAAASTASEPEDKSPRV 317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17 PLLSLPV----
                    SIMILARITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              QPLGTGLQQRPRHTVSPSPSPPPPPPRTPTWESPARPETPSPAIPSHSSNTALERPLAVQL 377
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -----LLQTLRQTMGTEAGESPGEAGPSTETPTPRGSMRKAFAGQNSNTVLSRLLA--- 102
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ---RTRKQHKQHGAAPE 116
 S10706; S10706
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              proteln; Antigen.
E 404 AA; 43373 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Slmilarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
                  BELONGS TO THE URQTENSIN 2 FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=2999442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -----TDTGERTLQLPVL-----EEDALRALEELERMA--- 51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             11.3%; Score 72.5;
24.1%; Pred. No. 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  533B5D5ECC05F960 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                     83 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             53;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 404;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                37;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4
```

```
밁
                                                                  Ş
                                                                                          Вþ
                                                                                                               Ş
                                                                                                                                                                                     SQ SQ
Search completed: March 10, 2003, 17:39:22 Job time: 8.98108 secs
                                                                                                                                        Matches
                                                                                                                                                  Query Match
Best Local
                                                                                                                                                                                    NON_CONS
PEPTIDE
DISULFID
SEQUENCE
                                                                                                                                                                                                                                           Interpro; IPR001483; Urotensin_II.

PROSTTE; PS00984; UROTENSIN_II; 1.

Hormone; Cleavage on pair of basic residues.

NON_TER 1 1

PEPTIDE 1 1

VROPHYSIN (POTE
                                                                                                                                                                                                                                 NON_CONS
                                                                    67
                                                                                                               22 PVTDTGERTLQLPV-LEEDALRALEELE-----RMALLQTLRQTMGTEAGE 66
                                              56
                                                                                           N
                                                                                          PITESAEMPYPGPASLEERGVGSLDDLSLSEQNYPPQRGAGLRYATLEVLLEKQ-----
                                              ----SLLNPFSRVFGIRKQFAG-----
                                                                   SPGEAGPSTETPTPR-GSMRKAFAGQNSNTVLSRLLARTRKQHKQHGAAPECFWKYCT
                                                                                                                                         28;
                                                                                                                                                  Similarity
                                                                                                                                                                                    83 AA;
                                                                                                                                         Conservative
                                                                                                                                                                                                                       >48
49
72
                                                                                                                                                                                      9292 MW;
                                                                                                                                                    11.2%;
23.7%;
                                                                                                                                         11;
                                                                                                                                                    Score 72; I
                                                                                                                                                                                      6DD057577E6DF703 CRC64;
                                                                                                                                                                                                                                               UROPHYSIN (POTENTIAL).
                                                                                                                                                                                                            URQTENSIN II.
                                                                                                                                         Mismatches
                                                                                                                                                     DB I;
1.8;
                                                                                                                                          27;
                                                                                                                                                              Length 83;
                                                                                                                                           Indels
                                                --TTECFWKYCV
                                                                                                                                           52;
                                                83
                                                                                                                                         Gaps
                                                                       123
                                                                                              55
```

S